REPUBLIC

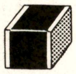
SUBMINIATURE CERAMIC CAPACITORS

10-1-85

QPL

APPROVED TO

MIL-C-55681B



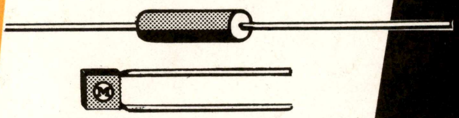
MIL-C-11272C

ULTRA Q MICROWAVE

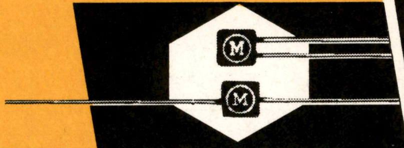
QPL

ER APPROVED

MIL-C-20

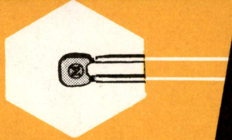


NPO CHARACTERISTIC



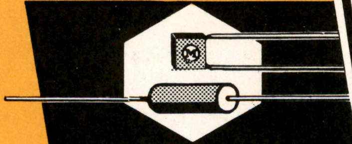
TEMPERATURE COMPENSATING

THINLINE



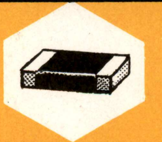
M-CAPS

MINIATURE MONOLITHIC



NPO ULTRA-STABLE

MU-CAPS



CHIPS

SINGLE OR MULTI-LAYER

1984

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MUCON® SUBminiature CERAMIC CAPACITORS

REPUBLIC ELECTRONICS CORPORATION

176 E. 7th St., PATERSON, N.J. 07524 • 201-279-0300 • TWX 710-988-5908

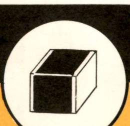
CATALOG U-1

Ultra-Q Miniature Microwave CERAMIC CAPACITORS QUALIFIED TO MIL-C-55681B

New CDR13 BG 101 E G M M

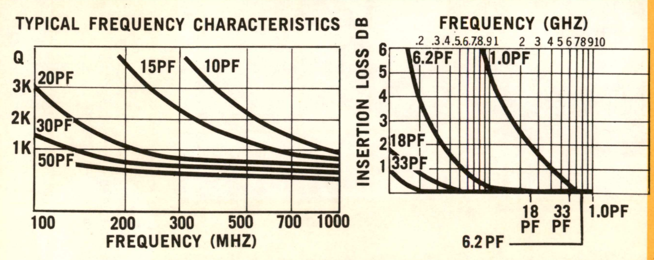
MIL-STYLE	WVDC	CAP. RANGE Pf	STYLE	CAPACITANCE	WVDC	CAPACITANCE TOLERANCE	FINISH	FAILURE RATE LEVEL
CDR11 & CDR12	50	.1-100	CDR11-Chip .055″ × .055″ CDR12-Tinned Chip .055″ × .055″ CDR13-Chip .110″ × .110″ CDR14-Tinned Chip .110″ × .110″ CDR21-Micro Strip .135″ × .110″ CDR22-Axial Ribbon .135″ × .110″ CDR23-Radial Wire .135″ × .110″ CDR24-Radial Ribbon .135″ × .110″ CDR25-Axial Wire .135″ × .110″	Nominal capacitance expressed in picofarads (pF) by three-digit number, first two digits represent significant figures, last digit specifies number of zeros to follow. When the nominal value is less than 10 pF, the letter 'R' indicates the decimal point and the succeeding digit(s) represent significant figure(s). For example: IRO indicates 1.0 pF; R75 indicates 0.75 pF and OR5 indicates 0.5 pF.	A=50 B=100 C=200 D=300 E=500	B= ±.1Pf C= ±.25Pf D= ±.5Pf F= ±1% G= ±2% J= ±5% K= ±10% M= ±20%	CDR11=M CDR12=S CDR13=M CDR14=S CDR21=T CDR22=T CDR23=S CDR24=T CDR25=S	Expressed in % per 1000 hours M=1.0% P=.1% R=.01%
CDR13 thru CDR25	500 300 200 100 50	.1-100 110-200 220-470 510-620 680-1000						

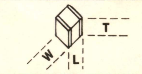
MUCON® Ultra-Q Miniature Microwave CERAMIC CAPACITORS



General Specifications

Capacitance Range: .1Pf through 1000Pf
Working Voltage: 50 through 500 vdc (see tables)
Q @ 1 MHz: 10,000 minimum
Dissipation Factor @ 1 MHz: less than .0001
Insulation Resistance: more than 100,000 megohms @ 25°C, 10,000 meg @ 125°C
Temperature Coefficient: +90±20 ppm/°C
Operating Temperature Range: −55°C to +125°C
Capacitance Tolerance: B=±.1Pf, C=±.25Pf, D=±.5Pf (values < 5Pf), F=±1%, G=±2%, J=±5%, K=±10% (values ≥5Pf)
Chip Termination: Palladium silver
Dielectric Strength: 250% of wvdc rating
Capacitance Drift: ±.1% or .1Pf, whatever is greater





SIZE	MIL STYLE	L + W	T. max.
01	CDR11	.055″±.015″	.057″
013	CDR13	0.110″±.020″	.102″

A state of the art ceramic capacitor designed for use at microwave frequencies. The superior dielectric properties of the ceramic material furnish extremely high Q and lowest loss of any type capacitor available. A minimum Q of 10,000 is guaranteed at 1 MHz. Units are available in either chip form or various leaded configurations. Typical applications include low noise FET circuits, high frequency, low noise receiver front ends and UHF microwave hybrids.

SIZE 01 — .050 x .050 x .050

Cap. Pf	Part Number	WVDC
0.1	01Q108B	50V
0.2	01Q208B	50V
0.3	01Q308B	50V
0.4	01Q408B	50V
0.5	01Q508B	50V
0.6	01Q608B	50V
0.7	01Q708B	50V
0.8	01Q808B	50V
0.9	01Q908B	50V
1.0	01Q109C	50V
1.1	01Q119C	50V
1.2	01Q129C	50V
1.3	01Q139C	50V
1.4	01Q149C	50V
1.5	01Q159C	50V
1.6	01Q169C	50V
1.7	01Q179C	50V
1.8	01Q189C	50V
1.9	01Q199C	50V
2.0	01Q209C	50V
2.1	01Q219C	50V
2.2	01Q229C	50V
2.7	01Q279C	50V
3.0	01Q309C	50V
3.3	01Q339C	50V
3.6	01Q369C	50V
3.9	01Q399C	50V
4.3	01Q439C	50V
4.7	01Q479C	50V
5.1	01Q519J	50V
5.6	01Q569J	50V

SIZE 01 — .050 x .050 x .050

Cap. Pf	Part Number	WVDC
6.2	01Q629J	50V
6.8	01Q689J	50V
7.5	01Q759J	50V
8.2	01Q829J	50V
9.1	01Q919J	50V
10	01Q100J	50V
11	01Q110J	50V
12	01Q120J	50V
13	01Q130J	50V
15	01Q150J	50V
16	01Q160J	50V
18	01Q180J	50V
20	01Q200J	50V
22	01Q220J	50V
24	01Q240J	50V
27	01Q270J	50V
30	01Q300J	50V
33	01Q330J	50V
36	01Q360J	50V
39	01Q390J	50V
43	01Q430J	50V
47	01Q470J	50V
51	01Q510J	50V
56	01Q560J	50V
62	01Q620J	50V
68	01Q680J	50V
75	01Q750J	50V
82	01Q820J	50V
91	01Q910J	50V
100	01Q101J	50V

SIZE 013 — .110 x .110 x .100

Cap. Pf	Part Number	WVDC
0.1	013Q108B	500V
0.2	013Q208B	500V
0.3	013Q308B	500V
0.4	013Q408B	500V
0.5	013Q508B	500V
0.6	013Q608B	500V
0.7	013Q708B	500V
0.8	013Q808B	500V
0.9	013Q908B	500V
1.0	013Q109C	500V
1.1	013Q119C	500V
1.2	013Q129C	500V
1.3	013Q139C	500V
1.4	013Q149C	500V
1.5	013Q159C	500V
1.6	013Q169C	500V
1.7	013Q179C	500V
1.8	013Q189C	500V
1.9	013Q199C	500V
2.0	013Q209C	500V
2.1	013Q219C	500V
2.2	013Q229C	500V
2.7	013Q279C	500V
3.0	013Q309C	500V
3.3	013Q339C	500V
3.6	013Q369C	500V
3.9	013Q399C	500V
4.3	013Q439C	500V
4.7	013Q479C	500V
5.1	013Q519J	500V

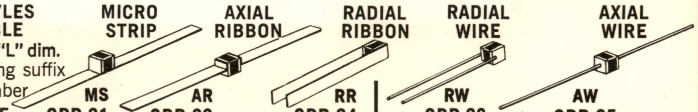
SIZE 013 — .110 x .110 x .100

Cap. Pf	Part Number	WVDC
5.6	013Q569J	500V
6.2	013Q629J	500V
6.8	013Q689J	500V
7.5	013Q759J	500V
8.2	013Q829J	500V
9.1	013Q919J	500V
10	013Q100J	500V
11	013Q110J	500V
12	013Q120J	500V
13	013Q130J	500V
15	013Q150J	500V
16	013Q160J	500V
18	013Q180J	500V
20	013Q200J	500V
22	013Q220J	500V
24	013Q240J	500V
27	013Q270J	500V
30	013Q300J	500V
33	013Q330J	500V
36	013Q360J	500V
39	013Q390J	500V
43	013Q430J	500V
47	013Q470J	500V
51	013Q510J	500V
56	013Q560J	500V
62	013Q620J	500V
68	013Q680J	500V
75	013Q750J	500V
82	013Q820J	500V
91	013Q910J	500V
100	013Q101J	500V

SIZE 013 — .110 x .110 x .100

Cap. Pf	Part Number	WVDC
110	013Q111J	300V
120	013Q121J	300V
130	013Q131J	300V
150	013Q151J	300V
160	013Q161J	300V
180	013Q181J	300V
200	013Q201J	300V
220	013Q221J	200V
240	013Q241J	200V
270	013Q271J	200V
300	013Q301J	200V
330	013Q331J	200V
360	013Q361J	200V
390	013Q391J	200V
430	013Q431J	200V
470	013Q471J	200V
510	013Q511J	100V
560	013Q561J	100V
620	013Q621J	100V
680	013Q681J	50V
750	013Q751J	50V
820	013Q821J	50V
910	013Q911J	50V
1000	013Q102J	50V

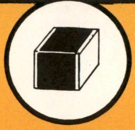
LEAD STYLES AVAILABLE
Add .020″ to "L" dim.
Add following suffix to part number



	MICRO STRIP	AXIAL RIBBON	RADIAL RIBBON	RADIAL WIRE	AXIAL WIRE
Suffix	MS	AR	RR	RW	AW
MIL STYLE	CDR 21	CDR 22	CDR 24	CDR 23	CDR 25
	CY85	CY86	CY88	CY87	CY89

Leads size: 013 .093″x.004″ silver
Leads: #26 AWG tinned copper

Ultra-Q Miniature Microwave CERAMIC CAPACITORS QUALIFIED TO MIL-C-11272C



New CY84 D 101 G

MIL-STYLE	WVDC	CAP. RANGE Pf
CY81 & CY82	50	.1-100
CY84 THRU CY87	500 300 200 100 50	.1-100 110-200 220-470 510-620 680-1000

STYLE

CY81 -Chip .055″ × .055″
CY82 -Tinned Chip .055″ × .055″
CY83 -Chip .110″ × .110″
CY84 -Tinned Chip .110″ × .110″
CY85 -Micro Strip .135″ × .110″
CY86 -Axial Ribbon .135″ × .110″
CY87 -Radial Wire .135″ × .110″
CY88 -Radial Ribbon .135″ × .110″
CY89 -Axial Wire .135″ × .110″

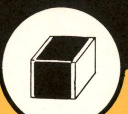
CAPACITANCE

Nominal capacitance expressed in picofarads (pF) by three-digit number, first two digits represent significant figures, last digit specifies number of zeros to follow. When the nominal value is less than 10 pF, the letter 'R' indicates the decimal point and the succeeding digit(s) represent significant figure(s). For example: IRO indicates 1.0 pF; R75 indicates 0.75 pF and OR5 indicates 0.5 pF.

CAPACITANCE TOLERANCE

B= ± .1Pf
C= ± .25Pf
D= ± .5Pf
F= ±1%
G= ± 2%
J = ± 5%
K= ± 10%
M= ± 20%

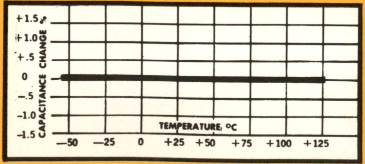
MUCON® ULTRA-STABLE Miniature CERAMIC CAPACITORS



Mucon Ultra Stable miniature ceramic capacitors meet applicable portions of MIL-C-55681

SPECIFICATIONS

Capacitance Range: .1Pf thru 10,000Pf. Values 1000Pf and below measured at 1MHz. Values above 1000 Pf measured at 1KHz.
Working Voltage: 50 thru 500VDC (see table)
Power Factor: Measured same as capacitance .05% max.
Insulation Resistance: More than 100,000 megohms @ 25°C. 10,000 megohms @ 125°C.
Dielectric Strength: 300% of rated voltage.
Temperature Range: −55°C to +125°C.
Temperature Coef: Zero ± 30PPM/°C.
Temperature Charac: ±.3% max from +25°C.



SIZE 01 .050 x .050 x .050

CAP. PF	PART NO.	WVDC
0.1	01C108B	50V
0.2	01C208B	50V
0.3	01C308B	50V
0.4	01C408B	50V
0.5	01C508B	50V
0.6	01C608B	50V
0.7	01C708B	50V
0.8	01C808B	50V
0.9	01C908B	50V
1.0	01C109C	50V
1.1	01C119C	50V
1.2	01C129C	50V
1.3	01C139C	50V
1.4	01C149C	50V
1.5	01C159C	50V
1.6	01C169C	50V
1.7	01C179C	50V
1.8	01C189C	50V
1.9	01C199C	50V
2.0	01C209C	50V
2.1	01C219C	50V
2.2	01C229C	50V
2.4	01C249C	50V
2.7	01C279C	50V
3.0	01C309C	50V
3.2	01C339C	50V
3.6	01C369C	50V
3.9	01C399C	50V
4.3	01C439C	50V

SIZE 01 .050 x .050 x .050

CAP. PF	PART NO.	WVDC
4.7	01C479C	50V
5.1	01C519J	50V
5.6	01C569J	50V
6.2	01C629J	50V
6.8	01C689J	50V
7.5	01C759J	50V
8.2	01C829J	50V
9.1	01C919J	50V
10	01C100J	50V
11	01C110J	50V
12	01C120J	50V
13	01C130J	50V
15	01C150J	50V
16	01C160J	50V
18	01C180J	50V
20	01C200J	50V
22	01C220J	50V
24	01C240J	50V
27	01C270J	50V
30	01C300J	50V
33	01C330J	50V
36	01C360J	50V
39	01C390J	50V
43	01C430J	50V
47	01C470J	50V
51	01C510J	50V
56	01C560J	50V
62	01C620J	50V
68	01C680J	50V

SIZE 01 .050 x .050 x .050

CAP. PF	PART NO.	WVDC
75	01C750J	50V
82	01C820J	50V
91	01C910J	50V
100	01C101J	50V
110	01C111J	50V
120	01C121J	50V
130	01C131J	50V
150	01C151J	50V
160	01C161J	50V
180	01C181J	50V
200	01C201J	50V
220	01C221J	50V
240	01C241J	50V
270	01C271J	50V
300	01C301J	50V
330	01C331J	50V
360	01C361J	50V
390	01C391J	50V
430	01C431J	50V
470	01C471J	50V
510	01C511J	50V
560	01C561J	50V
620	01C621J	50V
680	01C681J	50V
750	01C751J	50V
820	01C821J	50V
910	01C911J	50V
1000	01C102J	50V

SIZE 013 .110 x .110 x .100

CAP. PF	PART NO.	WVDC
0.1	013C108B	500V
0.2	013C208B	500V
0.3	013C308B	500V
0.4	013C408B	500V
0.5	013C508B	500V
0.6	013C608B	500V
0.7	013C708B	500V
0.8	013C808B	500V
0.9	013C908B	500V
1.0	013C109C	500V
1.1	013C119C	500V
1.2	013C129C	500V
1.3	013C139C	500V
1.4	013C149C	500V
1.5	013C159C	500V
1.6	013C169C	500V
1.7	013C179C	500V
1.8	013C189C	500V
1.9	013C199C	500V
2.0	013C209C	500V
2.1	013C219C	500V
2.2	013C229C	500V
2.4	013C249C	500V
2.7	013C279C	500V
3.0	013C309C	500V
3.2	013C339C	500V
3.6	013C369C	500V
3.9	013C399C	500V

SIZE 013 .110 x .110 x .100

CAP. PF	PART NO.	WVDC
4.3	013C439C	500V
4.7	013C479C	500V
5.1	013C519J	500V
5.6	013C569J	500V
6.2	013C629J	500V
6.8	013C689J	500V
7.5	013C759J	500V
8.2	013C829J	500V
9.1	013C919J	500V
10	013C100J	500V
11	013C110J	500V
12	013C120J	500V
13	013C130J	500V
15	013C150J	500V
16	013C160J	500V
18	013C180J	500V
20	013C200J	500V
22	013C220J	500V
24	013C240J	500V
27	013C270J	500V
30	013C300J	500V
33	013C330J	500V
36	013C360J	500V
39	013C390J	500V
43	013C430J	500V
47	013C470J	500V
51	013C510J	500V
56	013C560J	500V

SIZE 013 .110 x .110 x .100

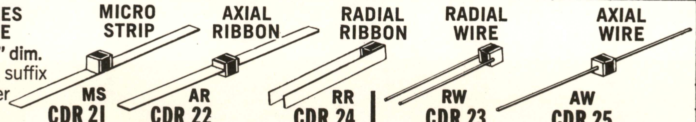
CAP. PF	PART NO.	WVDC
62	013C620J	500V
68	013C680J	500V
75	013C750J	500V
82	013C820J	500V
91	013C910J	500V
101	013C101J	500V
110	013C111J	300V
120	013C121J	300V
130	013C131J	300V
150	013C151J	300V
160	013C161J	300V
180	013C181J	300V
200	013C201J	300V
220	013C221J	200V
240	013C241J	200V
270	013C271J	200V
300	013C301J	200V
330	013C331J	200V
360	013C361J	200V
390	013C391J	200V
430	013C431J	200V
470	013C471J	200V
510	013C511J	100V
560	013C561J	100V
620	013C621J	100V
680	013C681J	50V
750	013C751J	50V

SIZE 013 .110 x .110 x .100

CAP. PF	PART NO.	WVDC
820	013C821J	50V
910	013C911J	50V
1000	013C102J	50V
1100	013C112J	50V
1200	013C122J	50V
1300	013C132J	50V
1500	013C152J	50V
1600	013C162J	50V
1800	013C182J	50V
2000	013C202J	50V
2200	013C222J	50V
2400	013C242J	50V
2700	013C272J	50V
3000	013C302J	50V
3300	013C332J	50V
3600	013C362J	50V
3900	013C392J	50V
4300	013C432J	50V
4700	013C472J	50V
5100	013C510J	50V
5600	013C562J	50V
6200	013C622J	50V
6800	013C682J	50V
7500	013C752J	50V
8200	013C822J	50V
9100	013C912J	50V
10,000	013C103J	50V

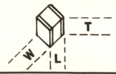
LEAD STYLES AVAILABLE

Add .020″ to "L" dim.
Add following suffix to part number



MILSTYLE	MS	AR	RR	RW	AW
MILSTYLE	CDR 21	CDR 22	CDR 24	CDR 23	CDR 25

Leads size: 013 .093″x.004″ silver
Leads: #26 AWG tinned copper

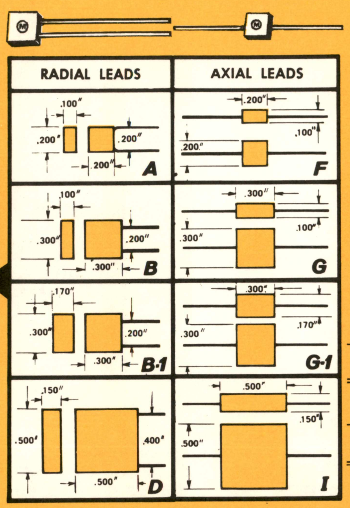


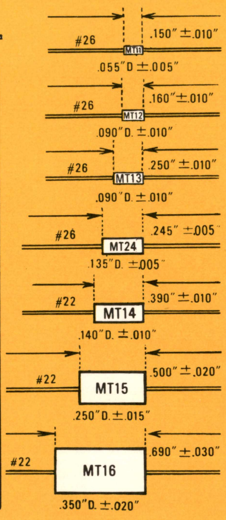
SIZE	L + W	T. max.
01	.055″±.015″	.057″
013	0.110″±.020″	.102″

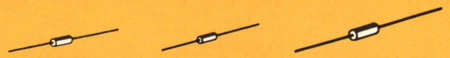
MUCON® MU-CAPS ULTRA-STABLE ±.3% MOLDED CAPACITORS

MUCON ultra stable MU-CAPS consist of capacitor elements made of MUCON NPO ceramic encased in a specially formulated epoxy. Meet MIL-C-20.

CAP. PF	MUCON PART RADIAL LEADS	CASE SIZE	MUCON PART AXIAL LEADS	CASE SIZE
CK05 SIZE .200″ x .200″ x .100″				
10	MU25CG100M	A	MU27CG100M	F
12	MU25CG120M	A	MU27CG120M	F
15	MU25CG150M	A	MU27CG150M	F
18	MU25CG180M	A	MU27CG180M	F
22	MU25CG220M	A	MU27CG220M	F
27	MU25CG270M	A	MU27CG270M	F
33	MU25CG330M	A	MU27CG330M	F
39	MU25CG390M	A	MU27CG390M	F
47	MU25CG470M	A	MU27CG470M	F
56	MU25CG560M	A	MU27CG560M	F
68	MU25CG680M	A	MU27CG680M	F
82	MU25CG820M	A	MU27CG820M	F
100	MU25CG101M	A	MU27CG101M	F
120	MU25CG121M	A	MU27CG121M	F
150	MU25CG151M	A	MU27CG151M	F
180	MU25CG181M	A	MU27CG181M	F
220	MU25CG221M	A	MU27CG221M	F
330	MU25CG331M	A	MU27CG331M	F
390	MU25CG391M	A	MU27CG391M	F
470	MU25CG471M	A	MU27CG471M	F
560	MU25CG561M	A	MU27CG561M	F
680	MU25CG681M	A	MU27CG681M	F
820	MU25CG821M	A	MU27CG821M	F
1000	MU25CG102M	A	MU27CG102M	F
1200	MU25CG122M	A	MU27CG122M	F
1500	MU25CG152M	A	MU27CG152M	F
1800	MU25CG182M	A	MU27CG182M	F
2200	MU25CG222M	A	MU27CG222M	F
2700	MU25CG272M	A	MU27CG272M	F
3300	MU25CG332M	A	MU27CG332M	F
3900	MU25CG392M	A	MU27CG392M	F
4700	MU25CG472M	A	MU27CG472M	F
5600	MU25CG562M	A	MU27CG562M	F
6800	MU25CG682M	A	MU27CG682M	F
8200	MU25CG822M	A	MU27CG822M	F
10,000	MU25CG103M	A	MU27CG103M	F
CK06 SIZE .300″ x .300″ x .100″				
1200	MU26CG122M	B	MU28CG122M	G
1500	MU26CG152M	B	MU28CG152M	G
1800	MU26CG182M	B	MU28CG182M	G
2200	MU26CG222M	B	MU28CG222M	G
2700	MU26CG272M	B	MU28CG272M	G
3300	MU26CG332M	B	MU28CG332M	G
3900	MU26CG392M	B	MU28CG392M	G
4700	MU26CG472M	B	MU28CG472M	G
5600	MU26CG562M	B	MU28CG562M	G
6800	MU26CG682M	B	MU28CG682M	G
8200	MU26CG822M	B	MU28CG822M	G
10,000	MU26CG103M	B	MU28CG103M	G
12,000	MU26CG123M	B	MU28CG123M	G
MODIFIED CK06 SIZE .300″ x .300″ x .170″				
15,000	MU29CG153M	B-1	MU30CG153M	G-1
18,000	MU29CG183M	B-1	MU30CG183M	G-1
22,000	MU29CG223M	B-1	MU30CG223M	G-1
27,000	MU29CG273M	B-1	MU30CG153M	G-1
33,000	MU29CG333M	B-1	MU30CG183M	G-1
39,000	MU29CG393M	B-1	MU30CG223M	G-1
47,000	MU29CG473M	B-1	MU30CG473M	G-1
CC68 SIZE .500″ x .500″ x .150″				
10,000	MU08CG103M	D	MU13CG103M	I
12,000	MU08CG123M	D	MU13CG123M	I
15,000	MU08CG153M	D	MU13CG153M	I
18,000	MU08CG183M	D	MU13CG183M	I
22,000	MU08CG223M	D	MU13CG223M	I
27,000	MU08CG273M	D	MU13CG273M	I
33,000	MU08CG333M	D	MU13CG333M	I
39,000	MU08CG393M	D	MU13CG393M	I
47,000	MU08CG473M	D	MU13CG473M	I
56,000	MU08CG563M	D	MU13CG563M	I
68,000	MU08CG683M	D	MU13CG683M	I
82,000	MU08CG823M	D	MU13CG823M	I
100,000	MU08CG104M	D	MU13CG104M	I
120,000	MU08CG124M	D	MU13CG124M	I
150,000	MU08CG154M	D	MU13CG154M	I
180,000	MU08CG184M	D	MU13CG184M	I
220,000	MU08CG224M	D	MU13CG224M	I





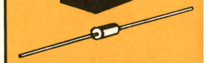


CAP. PF	MUCON PART
1	MT11CG109D
2	MT11CG209D
3	MT11CG309D
5	MT11CG509K
7.5	MT11CG759K
10	MT11CG100K
12	MT11CG120K
15	MT11CG150K
18	MT11CG180K
22	MT11CG220K
27	MT11CG270K
30	MT11CG300K
33	MT11CG330K
39	MT11CG390K
47	MT11CG470K
56	MT11CG560K
68	MT11CG680K
82	MT11CG820K
100	MT11CG101K
120	MT11CG121K
150	MT11CG151K
180	MT11CG181K
220	MT11CG221K
270	MT11CG271K
330	MT11CG331K
390	MT11CG391K
470	MT11CG471K
560	MT11CG561K

CAP. PF	MUCON PART
CK12 SIZE	
5	MT12CG509M
6	MT12CG609M
7	MT12CG709M
8	MT12CG809M
9	MT12CG909M
10	MT12CG100M
12	MT12CG120M
15	MT12CG150M
18	MT12CG180M
22	MT12CG220M
27	MT12CG270M
33	MT12CG330M
39	MT12CG390M
47	MT12CG470M
56	MT12CG560M
68	MT12CG680M
82	MT12CG820M
100	MT12CG101M
120	MT12CG121M
150	MT12CG151M
180	MT12CG181M
220	MT12CG221M
270	MT12CG271M
330	MT12CG331M
390	MT12CG391M
470	MT12CG471M
560	MT12CG561M
680	MT12CG681M
820	MT12CG821M
1000	MT12CG102M
1200	MT12CG122M
1500	MT12CG152M
1800	MT12CG182M

CAP. PF	MUCON PART
CK13 SIZE	
5	MT13CG509M
6	MT13CG609M
7	MT13CG709M
8	MT13CG809M
9	MT13CG909M
10	MT13CG100M
12	MT13CG120M
15	MT13CG150M
18	MT13CG180M
22	MT13CG220M
27	MT13CG270M
33	MT13CG330M
39	MT13CG390M
47	MT13CG470M
56	MT13CG560M
68	MT13CG680M
82	MT13CG820M
100	MT13CG101M
120	MT13CG121M
150	MT13CG151M
180	MT13CG181M
220	MT13CG221M
270	MT13CG271M
330	MT13CG331M
390	MT13CG391M
470	MT13CG471M
560	MT13CG561M
680	MT13CG681M
820	MT13CG821M
1000	MT13CG102M
1200	MT13CG122M
1500	MT13CG152M
1800	MT13CG182M
2200	MT13CG222M
2700	MT13CG272M
3300	MT13CG332M

NEW



CAP. PF	MUCON PART
MT24 SIZE	
1000	MT24CG102M
1200	MT24CG122M
1500	MT24CG152M
1800	MT24CG182M
2200	MT24CG222M
2700	MT24CG272M
3300	MT24CG332M
3900	MT24CG392M
4700	MT24CG472M
5600	MT24CG562M
6800	MT24CG682M
8200	MT24CG822M
10000	MT24CG103M

CAPACITANCE: Values 1000 Pf and below measured at 1 MHz. Values above 1000 Pf measured at 1 KHz

CAPAC. TOL.: Last letter of part number. Specify M for ±20%, K for ±10%, J for ±5%, G for ±2%, F for ±1%. Note all parts are shown for ±20%

POWER FACTOR: Measured same as capacitance .1% max.

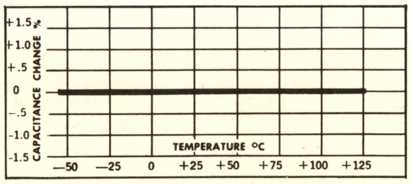
INSUL. RESIST.: 100,000 Megohms or 1000 Megohm Microfarads whichever is less.

WORKING VOLTAGE: 50 WVDC

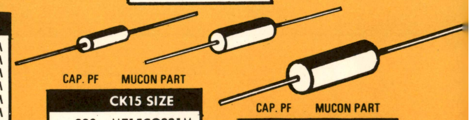
TEMP. RANGE: −55°C to +125°C.

TEMP. COEFF.: Zero ±30 ppm/°C

TEMP. CHARACT.: ±.3% max. from +25°C. See curve.



CAP. PF	MUCON PART
CK14 SIZE	
150	MT14CG151M
180	MT14CG181M
220	MT14CG221M
270	MT14CG271M
330	MT14CG331M
390	MT14CG391M
470	MT14CG471M
560	MT14CG561M
680	MT14CG681M
820	MT14CG821M
1000	MT14CG102M
1200	MT14CG122M
1500	MT14CG152M
1800	MT14CG182M
2200	MT14CG222M
2700	MT14CG272M
3300	MT14CG332M
3900	MT14CG392M
4700	MT14CG472M
5600	MT14CG562M
6800	MT14CG682M
8200	MT14CG822M
10000	MT14CG103M
12000	MT14CG123M
15000	MT14CG153M
18000	MT14CG183M
22000	MT14CG223M



CAP. PF	MUCON PART
CK15 SIZE	
820	MT15CG821M
1000	MT15CG102M
1200	MT15CG122M
1500	MT15CG152M
1800	MT15CG182M
2200	MT15CG222M
2700	MT15CG272M
3300	MT15CG332M
3900	MT15CG392M
4700	MT15CG472M
5600	MT15CG562M
6800	MT15CG682M
8200	MT15CG822M
10,000	MT15CG103M
12,000	MT15CG123M
15,000	MT15CG153M
18,000	MT15CG183M
22,000	MT15CG223M
27,000	MT15CG273M
33,000	MT15CG333M
39,000	MT15CG393M

CAP. PF	MUCON PART
CK16 SIZE	
6800	MT16CG682M
8200	MT16CG822M
10,000	MT16CG103M
12,000	MT16CG123M
15,000	MT16CG153M
18,000	MT16CG183M
22,000	MT16CG223M
27,000	MT16CG273M
33,000	MT16CG333M
39,000	MT16CG393M
47,000	MT16CG473M
56,000	MT16CG563M
68,000	MT16CG683M
82,000	MT16CG823M
100,000	MT16CG104M
120,000	MT16CG124M
150,000	MT16CG154M
180,000	MT16CG184M
220,000	MT16CG224M

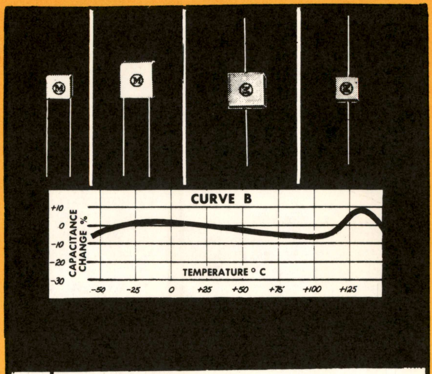
MU® CAPS

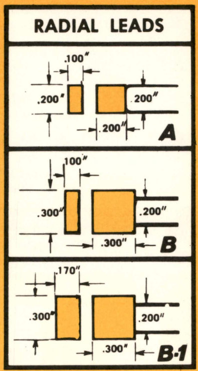
MUCON® MOLDED CAPACITORS

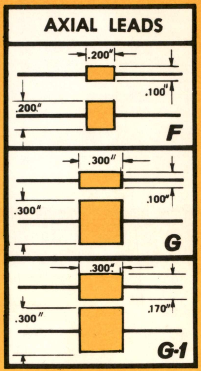
Mucon MU-CAPS® consist of capacitor elements made of Mucon Stable-K ceramic encased in a specially formulated epoxy.

QPL to MIL-C-11015/18 and/19

CAPACITANCE:	Values 100 Pf and below measured at 1 MHz. Values above 100 Pf measured at 1 KHz. 1 volt, 25° C.
CAPAC. TOL.:	Last letter of part number. Specify M for ±20%, K for ±10%. Note all parts shown for ±20%.
POWER FACTOR:	Less than 2.5%, at 1 KHz, 25°C.
LEADS:	No. 22 AWG tinned copper, 1¼" long min.
TEMP. RANGE:	50 WVDC capacitors, —55°C to +125°C. 100 WVDC Capacitors, —55°C to +125°C. 200 WVDC capacitors, —55°C to +150°C.
TEMP. CHARACT.:	±15% max. from 25°C, see Curve "B".
INSUL. RESIST.:	≥100,000 Megohms or 1,000 Megohm Microfarads, whichever is less.







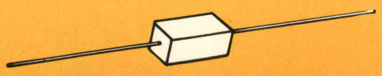
Any intermediate capacitance value is readily obtainable.

CAP. mf.	50 WVDC TO 2.0 M.F.				
	RADIAL LEADS			AXIAL LEADS	
	MUCON PART	MILITARY PART	CASE SIZE	MUCON PART	CASE SIZE
.012	MU25BX123M	CK05BX123M	A	MU27BX123M	F
.015	MU25BX153M	CK05BX153M	A	MU27BX153M	F
.018	MU25BX183M	CK05BX183M	A	MU27BX183M	F
.022	MU25BX223M	CK05BX223M	A	MU27BX223M	F
.027	MU25BX273M	CK05BX273M	A	MU27BX273M	F
.033	MU25BX333M	CK05BX333M	A	MU27BX333M	F
.039	MU25BX393M	CK05BX393M	A	MU27BX393M	F
.047	MU25BX473M	CK05BX473M	A	MU27BX473M	F
.056	MU25BX563M	CK05BX563M	A	MU27BX563M	F
.068	MU25BX683M	CK05BX683M	A	MU27BX683M	F
.082	MU25BX823M	CK05BX823M	A	MU27BX823M	F
.1	MU25BX104M	CK05BX104M	A	MU27BX104M	F
.12	MU26BX124M	CK06BX124M	B	MU28BX124M	G
.15	MU26BX154M	CK06BX154M	B	MU28BX154M	G
.18	MU26BX184M	CK06BX184M	B	MU28BX184M	G
.22	MU26BX224M	CK06BX224M	B	MU28BX224M	G
.27	MU26BX274M	CK06BX274M	B	MU28BX274M	G
.33	MU26BX334M	CK06BX334M	B	MU28BX334M	G
.39	MU26BX394M	CK06BX394M	B	MU28BX394M	G
.47	MU26BX474M	CK06BX474M	B	MU28BX474M	G
.56	MU26BX564M	CK06BX564M	B	MU28BX564M	G
.68	MU26BX684M	CK06BX684M	B	MU28BX684M	G
.82	MU26BX824M	CK06BX824M	B	MU28BX824M	G
.82	MU29BX824M		B-1	MU30BX824M	G-1
1.0	MU26BX105M	CK06BX105M	B	MU28BX105M	G
1.0	MU29BX105M		B-1	MU30BX105M	G-1
1.2	MU29BX125M		B-1	MU30BX125M	G-1
1.5	MU29BX155M		B-1	MU30BX155M	G-1
2.0	MU29BX205M		B-1	MU30BX205M	G-1

CAP. mf.	100 WVDC TO .1 MF.				
	RADIAL LEADS			AXIAL LEADS	
	MUCON PART	MILITARY PART	CASE SIZE	MUCON PART	CASE SIZE
.0012	MU25BX122M	CK05BX122M	A	MU27BX122M	F
.0015	MU25BX152M	CK05BX152M	A	MU27BX152M	F
.0018	MU25BX182M	CK05BX182M	A	MU27BX182M	F
.0022	MU25BX222M	CK05BX222M	A	MU27BX222M	F
.0027	MU25BX272M	CK05BX272M	A	MU27BX272M	F
.0033	MU25BX332M	CK05BX332M	A	MU27BX332M	F
.0039	MU25BX392M	CK05BX392M	A	MU27BX392M	F
.0047	MU25BX472M	CK05BX472M	A	MU27BX472M	F
.0056	MU25BX562M	CK05BX562M	A	MU27BX562M	F
.0068	MU25BX682M	CK05BX682M	A	MU27BX682M	F
.0082	MU25BX822M	CK05BX822M	A	MU27BX822M	F
.01	MU25BX103M	CK05BX103M	A	MU27BX103M	F
.012	MU26BX123M	CK06BX123M	B	MU28BX123M	G
.015	MU26BX153M	CK06BX153M	B	MU28BX153M	G
.018	MU26BX183M	CK06BX183M	B	MU28BX183M	G
.022	MU26BX223M	CK06BX223M	B	MU28BX223M	G
.027	MU26BX273M	CK06BX273M	B	MU28BX273M	G
.033	MU26BX333M	CK06BX333M	B	MU28BX333M	G
.039	MU26BX393M	CK06BX393M	B	MU28BX393M	G
.047	MU26BX473M	CK06BX473M	B	MU28BX473M	G
.056	MU26BX563M	CK06BX563M	B	MU28BX563M	G
.068	MU26BX683M	CK06BX683M	B	MU28BX683M	G
.082	MU26BX823M	CK06BX823M	B	MU28BX823M	G
.1	MU26BX104M	CK06BX104M	B	MU28BX104M	G

CAP. mmf.	200 WVDC TO .01 MF.				
	RADIAL LEADS			AXIAL LEADS	
	MUCON PART	MILITARY PART	CASE SIZE	MUCON PART	CASE SIZE
10	MU05CX100M	CK05BX100M	A	MU10CX100M	F
12	MU05CX120M	CK05BX120M	A	MU10CX120M	F
15	MU05CX150M	CK05BX150M	A	MU10CX150M	F
18	MU05CX180M	CK05BX180M	A	MU10CX180M	F
22	MU05CX220M	CK05BX220M	A	MU10CX220M	F
27	MU05CX270M	CK05BX270M	A	MU10CX270M	F
33	MU05CX330M	CK05BX330M	A	MU10CX330M	F
39	MU05CX390M	CK05BX390M	A	MU10CX390M	F
47	MU05CX470M	CK05BX470M	A	MU10CX470M	F
56	MU05CX560M	CK05BX560M	A	MU10CX560M	F
68	MU05CX680M	CK05BX680M	A	MU10CX680M	F
82	MU05CX820M	CK05BX820M	A	MU10CX820M	F
100	MU05CX101M	CK05BX101M	A	MU10CX101M	F
120	MU05CX121M	CK05BX121M	A	MU10CX121M	F
150	MU05CX151M	CK05BX151M	A	MU10CX151M	F
180	MU05CX181M	CK05BX181M	A	MU10CX181M	F
220	MU05CX221M	CK05BX221M	A	MU10CX221M	F
270	MU05CX271M	CK05BX271M	A	MU10CX271M	F
330	MU05CX331M	CK05BX331M	A	MU10CX331M	F
390	MU05CX391M	CK05BX391M	A	MU10CX391M	F
470	MU05CX471M	CK05BX471M	A	MU10CX471M	F
560	MU05CX561M	CK05BX561M	A	MU10CX561M	F
680	MU05CX681M	CK05BX681M	A	MU10CX681M	F
820	MU05CX821M	CK05BX821M	A	MU10CX821M	F
1000	MU05CX102M	CK05BX102M	A	MU10CX102M	F
1200	MU06CX122M	CK06BX122M	B	MU11CX122M	G
1500	MU06CX152M	CK06BX152M	B	MU11CX152M	G
1800	MU06CX182M	CK06BX182M	B	MU11CX182M	G
2200	MU06CX222M	CK06BX222M	B	MU11CX222M	G
2700	MU06CX272M	CK06BX272M	B	MU11CX272M	G
3300	MU06CX332M	CK06BX332M	B	MU11CX332M	G
3900	MU06CX392M	CK06BX392M	B	MU11CX392M	G
4700	MU06CX472M	CK06BX472M	B	MU11CX472M	G
5600	MU06CX562M	CK06BX562M	B	MU11CX562M	G
6800	MU06CX682M	CK06BX682M	B	MU11CX682M	G
8200	MU06CX822M	CK06BX822M	B	MU11CX822M	G
10000	MU06CX103M	CK06BX103M	B	MU11CX103M	G

Larger capacitance values as great as 10 MF. are available in dimensions to fit your needs



MUCON® CERAMIC CAPACITORS

MOLDED TUBULAR

QPL to MIL-C-11015/20 B

CAPACITANCE: Values 100 Pf and below measured at 1 MHz. Values above 100 Pf measured at 1 KHz. 1 volt, 25° C.

CAPAC. TOL.: Last letter of part number. Specify M for ±20%, K for ±10%. Note all parts are shown for ±20%.

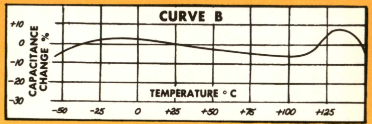
POWER FACTOR: Less than 2.5%, at 1 KHz, 25° C.

Leads: Tinned copper, 1¼" long min.

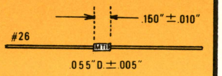
TEMP. RANGE: —55°C to +125°C.

TEMP. CHARACT.: ±15% max. from 25°C. See Curve B

INSUL. RESIST.: ≥100,000 Megohms or 1000 Megohm Microfarads, whichever is less.

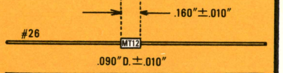


50 WVDC to 12,000 Pf.



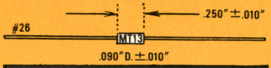
CAP. Pf.	MUCON PART	WVDC
100	MT11BX101M	50
120	MT11BX121M	50
150	MT11BX151M	50
180	MT11BX181M	50
220	MT11BX221M	50
270	MT11BX271M	50
330	MT11BX331M	50
390	MT11BX391M	50
470	MT11BX471M	50
560	MT11BX561M	50
680	MT11BX681M	50
820	MT11BX821M	50
1000	MT11BX102M	50
1200	MT11BX122M	50
1500	MT11BX152M	50
1800	MT11BX182M	50
2200	MT11BX222M	50
2700	MT11BX272M	50
3300	MT11BX332M	50
3900	MT11BX392M	50
4700	MT11BX472M	50
5600	MT11BX562M	50
6800	MT11BX682M	50
8200	MT11BX822M	50
10,000	MT11BX103M	50
12,000	MT11BX123M	50

50 WVDC to 10,000 Pf. 100 WVDC to 4700 Pf.



CAP. Pf.	MUCON PART	MILITARY PART	WVDC
10	MT12BX100M	CK12BX100M	100
12	MT12BX120M	CK12BX120M	100
15	MT12BX150M	CK12BX150M	100
18	MT12BX180M	CK12BX180M	100
22	MT12BX220M	CK12BX220M	100
27	MT12BX270M	CK12BX270M	100
33	MT12BX330M	CK12BX330M	100
39	MT12BX390M	CK12BX390M	100
47	MT12BX470M	CK12BX470M	100
56	MT12BX560M	CK12BX560M	100
68	MT12BX680M	CK12BX680M	100
82	MT12BX820M	CK12BX820M	100
100	MT12BX101M	CK12BX101M	100
120	MT12BX121M	CK12BX121M	100
150	MT12BX151M	CK12BX151M	100
180	MT12BX181M	CK12BX181M	100
220	MT12BX221M	CK12BX221M	100
270	MT12BX271M	CK12BX271M	100
330	MT12BX331M	CK12BX331M	100
390	MT12BX391M	CK12BX391M	100
470	MT12BX471M	CK12BX471M	100
560	MT12BX561M	CK12BX561M	100
680	MT12BX681M	CK12BX681M	100
820	MT12BX821M	CK12BX821M	100
1000	MT12BX102M	CK12BX102M	100
1200	MT12BX122M	CK12BX122M	100
1500	MT12BX152M	CK12BX152M	100
1800	MT12BX182M	CK12BX182M	100
2200	MT12BX222M	CK12BX222M	100
2700	MT12BX272M	CK12BX272M	100
3300	MT12BX332M	CK12BX332M	100
3900	MT12BX392M	CK12BX392M	100
4700	MT12BX472M	CK12BX472M	100
5600	MT12BX562M	CK12BX562M	50
6800	MT12BX682M	CK12BX682M	50
8200	MT12BX822M	CK12BX822M	50
10,000	MT12BX103M	CK12BX103M	50

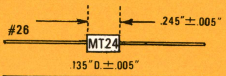
50 WVDC to .047 MF. 100 WVDC to .01 MF.



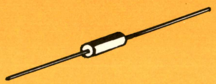
CAP. Pf.	MUCON PART	MILITARY PART	WVDC
10	MT13BX100M		100
12	MT13BX120M		100
15	MT13BX150M		100
18	MT13BX180M		100
22	MT13BX220M		100
27	MT13BX270M		100
33	MT13BX330M		100
39	MT13BX390M		100
47	MT13BX470M		100
56	MT13BX560M		100
68	MT13BX680M		100
82	MT13BX820M		100
100	MT13BX101M		100
120	MT13BX121M		100
150	MT13BX151M		100
180	MT13BX181M		100
220	MT13BX221M		100
270	MT13BX271M		100
330	MT13BX331M		100
390	MT13BX391M		100
470	MT13BX471M		100
560	MT13BX561M		100
680	MT13BX681M		100
820	MT13BX821M		100
1000	MT13BX102M		100
1200	MT13BX122M		100
1500	MT13BX152M		100
1800	MT13BX182M		100
2200	MT13BX222M		100
2700	MT13BX272M		100
3300	MT13BX332M		100
3900	MT13BX392M		100
4700	MT13BX472M		100
5600	MT13BX562M	CK13BX562M	100
6800	MT13BX682M	CK13BX682M	100
8200	MT13BX822M	CK13BX822M	100
10,000	MT13BX103M	CK13BX103M	100
12,000	MT13BX123M	CK13BX123M	50
15,000	MT13BX153M	CK13BX153M	50
18,000	MT13BX183M	CK13BX183M	50
22,000	MT13BX223M	CK13BX223M	50
27,000	MT13BX273M	CK13BR273M	50
33,000	MT13BX333M	CK13BR333M	50
39,000	MT13BX393M	CK13BR393M	50
47,000	MT13BX473M	CK13BR473M	50

NEW

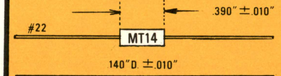
50 WVDC to .1 MF.



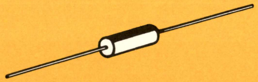
CAP. mf.	MUCON PART	WVDC
.012	MT24BX123M	50
.015	MT24BX153M	50
.018	MT24BX183M	50
.022	MT24BX223M	50
.027	MT24BX273M	50
.033	MT24BX333M	50
.039	MT24BX393M	50
.047	MT24BX473M	50
.056	MT24BX563M	50
.068	MT24BX683M	50
.082	MT24BX823M	50
.1	MT24BX104M	50



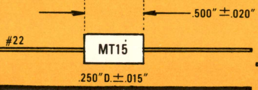
50 WVDC to .27 MF. 100 WVDC to .1 MF.



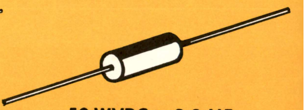
CAP. MF.	MUCON PART	MILITARY PART	WVDC
.012	MT14BX123M	CK14BX123M	100
.015	MT14BX153M	CK14BX153M	100
.018	MT14BX183M	CK14BX183M	100
.022	MT14BX223M	CK14BX223M	100
.027	MT14BX273M	CK14BX273M	100
.033	MT14BX333M	CK14BX333M	100
.039	MT14BX393M	CK14BX393M	100
.047	MT14BX473M	CK14BX473M	100
.056	MT14BX563M	CK14BR563M	100
.068	MT14BX683M	CK14BR683M	100
.1	MT14BX104M	CK14BR104M	100
.12	MT14BX124M	CK14BR124M	50
.15	MT14BX154M	CK14BR154M	50
.18	MT14BX184M	CK14BR184M	50
.22	MT14BX224M	CK14BR224M	50
.27	MT14BX274M	CK14BR274M	50



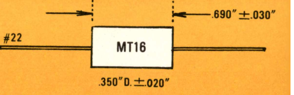
50 WVDC to 1.0 MF. 100 WVDC to .33 MF.



CAP. MF.	MUCON PART	MILITARY PART	WVDC
.1	MT15BX104M	CK15BX104M	100
.12	MT15BX124M	CK15BR124M	100
.15	MT15BX154M	CK15BR154M	100
.18	MT15BX184M	CK15BR184M	100
.22	MT15BX224M	CK15BR224M	100
.27	MT15BX274M	CK15BR274M	100
.33	MT15BX334M	CK15BR334M	100
.39	MT15BX394M	CK15BR394M	50
.47	MT15BX474M	CK15BR474M	50
.56	MT15BX564M	CK15BR564M	50
.68	MT15BX684M	CK15BR684M	50
.82	MT15BX824M	CK15BR824M	50
1.0	MT15BX105M	CK15BR105M	50



50 WVDC to 3.3 MF. 100 WVDC to 1.0 MF.

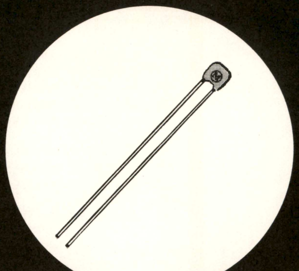


CAP. MF.	MUCON PART	MILITARY PART	WVDC
.47	MT16BX474M	CK16BR474M	100
.56	MT16BX564M	CK16BR564M	100
.68	MT16BX684M	CK16BR684M	100
.82	MT16BX824M	CK16BR824M	100
1.0	MT16BX105M	CK16BR105M	100
1.2	MT16BX125M	CK16BR125M	50
1.5	MT16BX155M	CK16BR155M	50
1.8	MT16BX185M	CK16BR185M	50
2.2	MT16BX225M	CK16BR225M	50
2.7	MT16BX275M	CK16BR275M	50
3.3	MT16BX335M	CK16BR335M	50

Any intermediate capacitance value is readily obtainable.

MUCON® M-CAPS

M-CAPS are monolithic capacitors with maximum capacitance/volume ratio in a choice of 3 dielectrics to cover all requirements.



SPECIFICATIONS	NPO	STABLE-K	HIGH-K
Capacitance Tol.:	K for ±10%, G for ±2% J for ±5%, F for ±1% D for ±.5 Pf, C for ±.25 Pf	M for ±20% K for ±10%	M for ±20% Z for GMV
Capacitance:	≤1000 Pf @ 1MHz, 25°C >1000 Pf @ 1KHz, 25°C	@ 1KHz, 1V. 25°C	@ 1KHz, 1V. 25°C
Power Factor:	.1% @ 1MHz	2.5% max @ 1KHz	2.5% max @ 1KHz
Temp Charact.:	Zero ±30ppm/°C	see Curve	see Curve
Insul Resist:	100,000 Megohms . . . . or	1000 Megohm Microfarads	whichever is less
Temp Range:	−55°C to +125°C	−55°C to +125°C	−55°C to +125°C
Coating:	Epoxy	Epoxy	Epoxy

NPO

CAP.	100 WVDC PART NO.
2.2	DR10CB229K
2.7	DR10CB279K
3.3	DR10CB339K
4.7	DR10CB479K
5.6	DR10CB569K
6.8	DR10CB689K
8.2	DR10CB829K
10	DR10CB100K
12	DR15CB120K
15	DR15CB150K
18	DR15CB180K
22	DR15CB220K
27	DR20CB270K
33	DR20CB330K
39	DR20CB390K
47	DR20CB470K
56	DR20CB560K
68	DR20CB680K
82	DR20CB820K
100	DR20CB101K
120	DR20CB121K
150	DR20CB151K
180	DR20CB181K
220	DR20CB221K
270	DR20CB271K
330	DR20CB331K
390	DR20CB391K
470	DR20CB471K
560	DR20CB561K
680	DR20CB681K
820	DR20CB821K
1000	DR20CB102K
1200	DR30CB122K
1500	DR30CB152K
1800	DR30CB182K
2200	DR30CB222K
2700	DR30CB272K
3300	DR30CB332K
3900	DR30CB392K
4700	DR30CB472K
5600	DR30CB562K
6800	DR30CB682K
8200	DR30CB822K
10,000	DR30CB103K
12,000	DR30CB123K
15,000	DR30CB153K
18,000	DR30CB183K
22,000	DR30CB223K
27,000	DR30CB273K
33.000	DR30CB333K

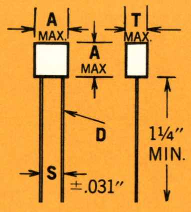
STABLE-K

50 WVDC PART NO.	CAP.	100 WVDC PART NO.
DR10EA121M	120	DR10EB121M
DR10EA151M	150	DR10EB151M
DR10EA181M	180	DR10EB181M
DR10EA221M	220	DR10EB221M
DR10EA271M	270	DR10EB271M
DR10EA331M	330	DR10EB331M
DR15EA391M	390	DR15EB391M
DR15EA471M	470	DR15EB471M
DR15EA561M	560	DR15EB561M
DR15EA681M	680	DR15EB681M
DR15EA821M	820	DR15EB821M
DR20EA102M	1000	DR20EB102M
DR20EA122M	1200	DR20EB122M
DR20EA152M	1500	DR20EB152M
DR20EA182M	1800	DR20EB182M
DR20EA222M	2200	DR20EB222M
DR20EA272M	2700	DR20EB272M
DR20EA332M	3300	DR20EB332M
DR20EA392M	3900	DR20EB392M
DR20EA472M	4700	DR20EB472M
DR20EA562M	5600	DR20EB562M
DR20EA682M	6800	DR20EB682M
DR20EA822M	8200	DR20EB822M
DR20EA103M	.01	DR20EB103M
DR30EA123M	.012	DR30EB123M
DR30EA153M	.015	DR30EB153M
DR30EA183M	.018	DR30EB183M
DR30EA223M	.022	DR30EB223M
DR30EA273M	.027	DR30EB273M
DR30EA333M	.033	DR30EB333M
DR30EA393M	.039	DR30EB393M
DR30EA473M	.047	DR30EB473M
DR30EA563M	.056	DR30EB563M
DR30EA683M	.068	DR30EB683M
DR30EA823M	.082	DR30EB823M
DR30EA104M	.1	DR30EB104M
DR30EA124M	.12	DR30EB124M
DR30EA154M	.15	DR30EB154M
DR30EA184M	.18	DR30EB184M
DR30EA224M	.22	DR30EB224M
DR30EA274M	.27	
DR30EA334M	.33	
DR30EA394M	.39	
DR30EA474M	.47	
DR30EA564M	.56	
DR30EA684M	.68	
DR30EA824M	.82	
DR30EA105M	1.0	

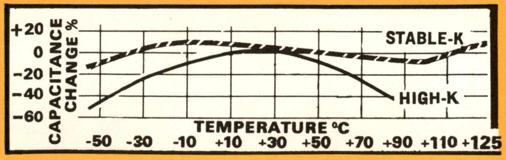
HIGH-K

50 WVDC PART NO.	CAP.	100 WVDC PART NO.
DR10FA471M	470	DR10FB471M
DR10FA681M	680	DR10FB681M
DR10FA102M	1000	DR10FB102M
DR10FA152M	1500	DR10FB152M
DR10FA182M	1800	DR10FB182M
DR15FA222M	2200	DR15FB222M
DR15FA272M	2700	DR15FB272M
DR15FA332M	3300	DR15FB332M
DR15FA392M	3900	DR15FB392M
DR15FA472M	4700	DR15FB472M
DR20FA682M	6800	DR20FB682M
DR20FA103M	.01	DR20FB103M
DR20FA153M	.015	DR20FB153M
DR20FA223M	.022	DR20FB223M
DR20FA273M	.027	DR20FB273M
DR20FA333M	.033	DR20FB333M
DR20FA393M	.039	DR20FB393M
DR20FA473M	.047	DR20FB473M
DR20FA683M	.068	DR20FB683M
DR20FA104M	.1	DR20FB104M
DR20FA154M	.15	DR30FB154M
DP30FA224M	.22	DR30FB224M
DR30FA274M	.27	DR30FB274M
DR30FA334M	.33	DR30FB334M
DR30FA394M	.39	DR30FB394M
DR30FA474M	.47	DR30FB474M
DR30FA684M	.68	
DR30FA105M	1.0	

DIMENSIONS

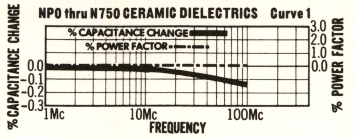


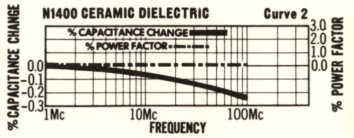
STYLE	A MAX	T MAX	S C to C	D AWG
DR10	.100″	.100″	.100″	26
DR15	.150″	.100″	.100″	26
DR20	.200″	.125″	.100″	24
DR30	.300″	.150″	.200″	24

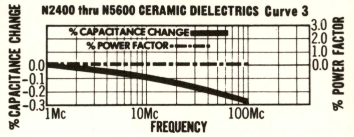


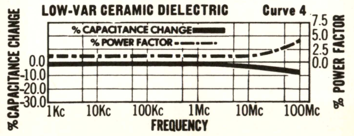
FREQUENCY CHARACTERISTICS

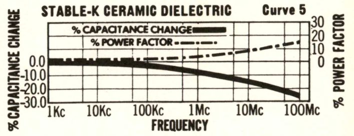
Since the inductance of leads greatly affects the frequency characteristic of a capacitor, measurements for the curves below were made with very heavy leads, to make them represent only the properties of the ceramic itself.

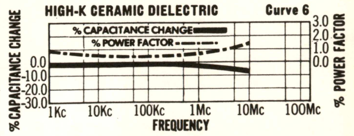


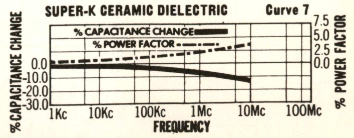












MUCON® THINLINE TEMPERATURE COMPENSATING SUBminiature CERAMIC CAPACITORS

NPO CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
.5*	1C.5RC	.150x.110	2C.5RC	.150x.110
1.0*	1C1RC	.100 Sq	2C1RC	.100 Sq
1.5*	1C1.5RC	.100 Sq	2C1.5RC	.100 Sq
2.0	1C2RK	.100 Sq	2C2RK	.100 Sq
2.5	1C2.5RK	.100 Sq	2C2.5RK	.100 Sq
5	1C5RK	.100 Sq	2C5RK	.120 Sq
7	1C7RK	.120 Sq	2C7RK	.135 Sq
10	1C10RK	.140 Sq	2C10RK	.160 Sq
12	1C12RK	.150 Sq	2C12RK	.175 Sq
15	1C15RK	.165 Sq	2C15RK	.190 Sq
18	1C18RK	.180 Sq	2C18RK	.205 Sq
22	1C22RK	.190 Sq	2C22RK	.230 Sq
25	1C25RK	.200 Sq	2C25RK	.240 Sq
27	1C27RK	.205 Sq	2C27RK	.250 Sq
33	1C33RK	.225 Sq	2C33RK	.270 Sq
39	1C39RK	.250 Sq	2C39RK	.290 Sq
47	1C47RK	.270 Sq	2C47RK	.315 Sq
51	1C51RK	.280 Sq	2C51RK	.330 Sq
56	1C56RK	.290 Sq	2C56RK	.345 Sq
68	1C68RK	.315 Sq	2C68RK	.375 Sq
75	1C75RK	.330 Sq	2C75RK	.395 Sq
82	1C82RK	.345 Sq	2C82RK	.410 Sq
100	1C100RK	.380 Sq	2C100RK	.450 Sq
120	1C120RK	.415 Sq	2C120RK	.490 Sq
150	1C150RK	.460 Sq		
180	1C180RK	.500 Sq		

N080 CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
.5*	1L.5RC	.150x.110	2L.5RC	.150x.110
1.0*	1L1RC	.100 Sq	2L1RC	.100 Sq
1.5*	1L1.5RC	.100 Sq	2L1.5RC	.100 Sq
2.0*	1L2RK	.100 Sq	2L2RK	.100 Sq
2.5	1L2.5RK	.100 Sq	2L2.5RK	.100 Sq
5	1L5RK	.100 Sq	2L5RK	.115 Sq
7	1L7RK	.115 Sq	2L7RK	.130 Sq
10	1L10RK	.130 Sq	2L10RK	.150 Sq
12	1L12RK	.140 Sq	2L12RK	.160 Sq
15	1L15RK	.155 Sq	2L15RK	.180 Sq
18	1L18RK	.165 Sq	2L18RK	.190 Sq
22	1L22RK	.180 Sq	2L22RK	.210 Sq
25	1L25RK	.190 Sq	2L25RK	.220 Sq
27	1L27RK	.195 Sq	2L27RK	.230 Sq
33	1L33RK	.215 Sq	2L33RK	.255 Sq
39	1L39RK	.230 Sq	2L39RK	.275 Sq
47	1L47RK	.250 Sq	2L47RK	.305 Sq
51	1L51RK	.265 Sq	2L51RK	.315 Sq
56	1L56RK	.275 Sq	2L56RK	.325 Sq
68	1L68RK	.300 Sq	2L68RK	.355 Sq
75	1L75RK	.315 Sq	2L75RK	.370 Sq
82	1L82RK	.330 Sq	2L82RK	.390 Sq
100	1L100RK	.360 Sq	2L100RK	.425 Sq
120	1L120RK	.390 Sq	2L120RK	.460 Sq
150	1L150RK	.430 Sq	2L150RK	.510 Sq
180	1L180RK	.470 Sq		
220	1L220RK	.520 Sq		

N150 CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
.5*	1P.5RC	.150x.110	2P.5RC	.150x.110
1.0*	1P1RC	.100 Sq	2P1RC	.100 Sq
2.0*	1P2RK	.100 Sq	2P2RK	.100 Sq
2.5*	1P2.5RK	.100 Sq	2P2.5RK	.100 Sq
3	1P3RK	.100 Sq	2P3RK	.100 Sq
4	1P4RK	.100 Sq	2P4RK	.100 Sq
5	1P5RK	.100 Sq	2P5RK	.110 Sq
7	1P7RK	.105 Sq	2P7RK	.125 Sq
10	1P10RK	.125 Sq	2P10RK	.145 Sq
12	1P12RK	.135 Sq	2P12RK	.155 Sq
15	1P15RK	.150 Sq	2P15RK	.175 Sq
18	1P18RK	.160 Sq	2P18RK	.185 Sq
22	1P22RK	.175 Sq	2P22RK	.205 Sq
25	1P25RK	.185 Sq	2P25RK	.215 Sq
27	1P27RK	.190 Sq	2P27RK	.225 Sq
33	1P33RK	.205 Sq	2P33RK	.240 Sq
39	1P39RK	.220 Sq	2P39RK	.270 Sq
47	1P47RK	.240 Sq	2P47RK	.290 Sq
51	1P51RK	.250 Sq	2P51RK	.300 Sq
56	1P56RK	.265 Sq	2P56RK	.315 Sq
68	1P68RK	.290 Sq	2P68RK	.345 Sq
75	1P75RK	.305 Sq	2P75RK	.360 Sq
82	1P82RK	.315 Sq	2P82RK	.375 Sq
100	1P100RK	.345 Sq	2P100RK	.410 Sq
120	1P120RK	.375 Sq	2P120RK	.445 Sq
150	1P150RK	.415 Sq	2P150RK	.495 Sq
180	1P180RK	.440 Sq		
220	1P220RK	.500 Sq		

N220 CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
.5*	1R.5RC	.150x.110	2R.5RC	150x.110
1.0*	1R1RC	.100 Sq	2R1RC	.100 Sq
2.0*	1R2RK	.100 Sq	2R2RK	.100 Sq
2.5*	1R2.5RK	.100 Sq	2R2.5RK	.100 Sq
3	1R3RK	.100 Sq	2R3RK	.100 Sq
4	1R4RK	.100 Sq	2R4RK	.100 Sq
5	1R5RK	.100 Sq	2R5RK	.100 Sq
7	1R7RK	.100 Sq	2R7RK	.120 Sq
10	1R10RK	.120 Sq	2R10RK	.140 Sq
12	1R12RK	.130 Sq	2R12RK	.150 Sq
15	1R15RK	.140 Sq	2R15RK	.165 Sq
18	1R18RK	.150 Sq	2R18RK	.175 Sq
22	1R22RK	.165 Sq	2R22RK	.195 Sq
25	1R25RK	.175 Sq	2R25RK	.205 Sq
27	1R27RK	.180 Sq	2R27RK	.210 Sq
33	1R33RK	.195 Sq	2R33RK	.230 Sq
39	1R39RK	.210 Sq	2R39RK	.250 Sq
47	1R47RK	.230 Sq	2R47RK	.275 Sq
51	1R51RK	.240 Sq	2R51RK	.285 Sq
56	1R56RK	.250 Sq	2R56RK	.300 Sq
68	1R68RK	.275 Sq	2R68RK	.325 Sq
75	1R75RK	.290 Sq	2R75RK	.340 Sq
82	1R82RK	.300 Sq	2R82RK	.355 Sq
100	1R100RK	.330 Sq	2R100RK	.390 Sq
120	1R120RK	.355 Sq	2R120RK	.425 Sq
150	1R150RK	.395 Sq	2R150RK	.470 Sq
180	1R180RK	.430 Sq	2R180RK	.510 Sq
220	1R220RK	.475 Sq		
270	1R270RK	.520 Sq		

N330 CERAMIC

.5*	1S.5RC	.150x.110	2S.5RC	.150x.110
1.0*	1S1RC	.100 Sq	2S1RC	.100 Sq
2.0*	1S2RK	.100 Sq	2S2RK	.100 Sq
2.5*	1S2.5RK	.100 Sq	2S2.5RK	.100 Sq
3	1S3RK	.100 Sq	2S3RK	.100 Sq
4	1S4RK	.100 Sq	2S4RK	.100 Sq
5	1S5RK	.100 Sq	2S5RK	.100 Sq
7	1S7RK	.100 Sq	2S7RK	.115 Sq
10	1S10RK	.110 Sq	2S10RK	.130 Sq
12	1S12RK	.120 Sq	2S12RK	.145 Sq
15	1S15RK	.135 Sq	2S15RK	.155 Sq
18	1S18RK	.145 Sq	2S18RK	.170 Sq
22	1S22RK	.160 Sq	2S22RK	.185 Sq
25	1S25RK	.165 Sq	2S25RK	.195 Sq
27	1S27RK	.175 Sq	2S27RK	.205 Sq
33	1S33RK	.185 Sq	2S33RK	.220 Sq
39	1S39RK	.200 Sq	2S39RK	.240 Sq
47	1S47RK	.220 Sq	2S47RK	.265 Sq
51	1S51RK	.230 Sq	2S51RK	.275 Sq
56	1S56RK	.240 Sq	2S56RK	.285 Sq
68	1S68RK	.265 Sq	2S68RK	.310 Sq
75	1S75RK	.275 Sq	2S75RK	.325 Sq
82	1S82RK	.285 Sq	2S82RK	.340 Sq
100	1S100RK	.315 Sq	2S100RK	.370 Sq
120	1S120RK	.340 Sq	2S120RK	.405 Sq
150	1S150RK	.375 Sq	2S150RK	.445 Sq
180	1S180RK	.410 Sq	2S180RK	.485 Sq
220	1S220RK	.450 Sq		
270	1S270RK	.495 Sq		

SPECIFICATIONS

CAPACITANCE: Measured at 1 MHz, 25°C.

CAPAC. TOL: Last letter of part number. Specify M for ±20%, K for ±10% J for ± 5% D for ±.5Pf., C for ±.25 Pf.

WIRE LEADS: Unless otherwise specified, No. 26 tinned copper wire, except values marked with asterisk (*) have No. 30 wire. 1¼″ long min. Specify R for radial or A for axial wire leads, just after capacitance value in Part No. All part numbers in tables show R for radial leads. Request pure nickel for welding.

RIBBON LEADS: For lower lead inductance specify RLA, just after capacitance value in Part No. .093″x .006″ ribbon leads for units with max. size of .150″ and up; .045″x .006″ where max. size is less than .150″.

LEAD SPACING: Radial lead capacitors have C to C lead spacing as follows:
.100±1/32 for catalog width thru .275
.200±1/32 for catalog width .280 thru .475
.400±1/32 for catalog width >.475
Lead spacings for radial lead parts using #30 leads (marked with *) are not specified.

POWER FACTOR: Less than .2%, at 1 MHz, 25°C.

TEMP. RANGE: -60°C to +125°C.

SIZE: Max. area dimensions are listed in tables Max. thick. is .090″

COATING: Vacuum-impregnated phenolic insulation.

FREQ. CHARACT.: See applicable curves on Page 6

N450 CERAMIC

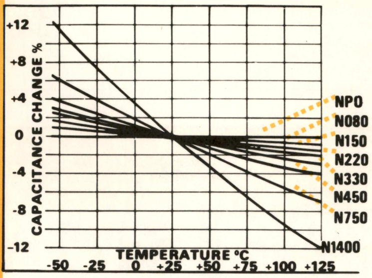
.5*	1T.5RC	.150x.110	2T.5RC	.150x.110
1.0*	1T1RC	.150x.110	2T1RC	.150x.110
2.0*	1T2RK	.100 Sq	2T2RK	.100 Sq
2.5*	1T2.5RK	.100 Sq	2T2.5RK	.100 Sq
3	1T3RK	.100 Sq	2T3RK	.100 Sq
4	1T4RK	.100 Sq	2T4RK	.100 Sq
5	1T5RK	.100 Sq	2T5RK	.100 Sq
7	1T7RK	.100 Sq	2T7RK	.105 Sq
10	1T10RK	.105 Sq	2T10RK	.125 Sq
12	1T12RK	.115 Sq	2T12RK	.135 Sq
15	1T15RK	.125 Sq	2T15RK	.145 Sq
18	1T18RK	.135 Sq	2T18RK	.160 Sq
22	1T22RK	.150 Sq	2T22RK	.175 Sq
25	1T25RK	.155 Sq	2T25RK	.185 Sq
27	1T27RK	.160 Sq	2T27RK	.190 Sq
33	1T33RK	.175 Sq	2T33RK	.205 Sq
39	1T39RK	.190 Sq	2T39RK	.225 Sq
47	1T47RK	.205 Sq	2T47RK	.245 Sq
51	1T51RK	.215 Sq	2T51RK	.255 Sq
56	1T56RK	.225 Sq	2T56RK	.265 Sq
68	1T68RK	.245 Sq	2T68RK	.290 Sq
75	1T75RK	.255 Sq	2T75RK	.305 Sq
82	1T82RK	.265 Sq	2T82RK	.315 Sq
100	1T100RK	.295 Sq	2T100RK	.345 Sq
120	1T120RK	.320 Sq	2T120RK	.375 Sq
150	1T150RK	.350 Sq	2T150RK	.415 Sq
180	1T180RK	.380 Sq	2T180RK	.455 Sq
220	1T220RK	.420 Sq	2T220RK	.500 Sq
270	1T270RK	.460 Sq		
330	1T330RK	.510 Sq		

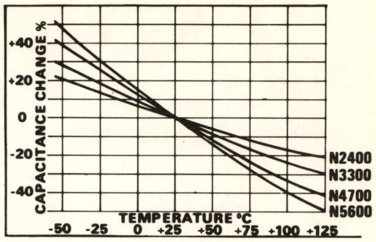
N750 CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
.5*	1U.5RC	.150x.110	2U.5RC	.150x.110
1.0*	1U1RC	.150x.110	2U1RC	.150x.110
2.0*	1U2RK	.100 Sq	2U2RK	.100 Sq
2.5*	1U2.5RK	.100 Sq	2U2.5RK	.100 Sq
3*	1U3RK	.100 Sq	2U3RK	.100 Sq
4	1U4RK	.100 Sq	2U4RK	.100 Sq
5	1U5RK	.100 Sq	2U5RK	.100 Sq
7	1U7RK	.100 Sq	2U7RK	.100 Sq
10	1U10RK	.100 Sq	2U10RK	.105 Sq
12	1U12RK	.100 Sq	2U12RK	.115 Sq
15	1U15RK	.105 Sq	2U15RK	.125 Sq
18	1U18RK	.115 Sq	2U18RK	.135 Sq
22	1U22RK	.125 Sq	2U22RK	.150 Sq
25	1U25RK	.135 Sq	2U25RK	.155 Sq
27	1U27RK	.140 Sq	2U27RK	.160 Sq
33	1U33RK	.150 Sq	2U33RK	.175 Sq
39	1U39RK	.160 Sq	2U39RK	.190 Sq
47	1U47RK	.175 Sq	2U47RK	.205 Sq
51	1U51RK	.180 Sq	2U51RK	.210 Sq
56	1U56RK	.190 Sq	2U56RK	.220 Sq
68	1U68RK	.205 Sq	2U68RK	.245 Sq
75	1U75RK	.215 Sq	2U75RK	.255 Sq
82	1U82RK	.225 Sq	2U82RK	.265 Sq
100	1U100RK	.250 Sq	2U100RK	.290 Sq
120	1U120RK	.270 Sq	2U120RK	.315 Sq
150	1U150RK	.295 Sq	2U150RK	.350 Sq
180	1U180RK	.320 Sq	2U180RK	.380 Sq
220	1U220RK	.355 Sq	2U220RK	.415 Sq
270	1U270RK	.385 Sq	2U270RK	.460 Sq
330	1U330RK	.425 Sq	2U330RK	.505 Sq
390	1U390RK	.460 Sq		

TEMPERATURE CHARACTERISTICS

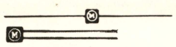
NPO Ceramic	Zero± 30 ppm/°C.	N750 Ceramic	Negative 750 ppm/°C± 100 ppm/°C.
N080 Ceramic	Negative 80 ppm/°C±40 ppm/°C.	N1400 Ceramic	Negative 1400 ppm/°C±250 ppm/°C.
N150 Ceramic	Negative 150 ppm/°C±40 ppm/°C.	N2400 Ceramic	Negative 2400 ppm/°C±400 ppm/°C.
N220 Ceramic	Negative 220 ppm/°C±50 ppm/°C.	N3300 Ceramic	Negative 3300 ppm/°C±600 ppm/°C.
N330 Ceramic	Negative 330 ppm/°C±50 ppm/°C.	N4700 Ceramic	Negative 4700 ppm/°C±900 ppm/°C.
N450 Ceramic	Negative 450 ppm/°C±60 ppm/°C.	N5600 Ceramic	Negative 5600 ppm/°C±1000 ppm/°C.



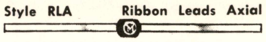


Axial Leads

Radial Leads



Style RLA Ribbon Leads Axial



Any intermediate capacitance value or any rectangular capacitor (instead of square) is readily obtainable in approximately the same time.

N1400 CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
1.0*	1V1RC	.150x.110	2V1RC	.150x.110
2.0*	1V2RC	.150x.110	2V2RC	.150x.110
2.5*	1V2.5RC	.150x.110	2V2.5RC	.150x.110
3*	1V3RK	.150x.110	2V3RK	.150x.110
5*	1V5RK	.100 Sq	2V5RK	.100 Sq
7	1V7RK	.100 Sq	2V7RK	.100 Sq
10	1V10RK	.100 Sq	2V10RK	.100 Sq
12	1V12RK	.100 Sq	2V12RK	.100 Sq
15	1V15RK	.100 Sq	2V15RK	.105 Sq
18	1V18RK	.100 Sq	2V18RK	.115 Sq
22	1V22RK	.110 Sq	2V22RK	.125 Sq
25	1V25RK	.115 Sq	2V25RK	.135 Sq
27	1V27RK	.120 Sq	2V27RK	.140 Sq
33	1V33RK	.130 Sq	2V33RK	.150 Sq
39	1V39RK	.135 Sq	2V39RK	.160 Sq
47	1V47RK	.145 Sq	2V47RK	.175 Sq
51	1V51RK	.155 Sq	2V51RK	.180 Sq
56	1V56RK	.160 Sq	2V56RK	.185 Sq
68	1V68RK	.175 Sq	2V68RK	.205 Sq
75	1V75RK	.180 Sq	2V75RK	.210 Sq
82	1V82RK	.185 Sq	2V82RK	.220 Sq
100	1V100RK	.205 Sq	2V100RK	.245 Sq
120	1V120RK	.220 Sq	2V120RK	.265 Sq
150	1V150RK	.245 Sq	2V150RK	.295 Sq
180	1V180RK	.270 Sq	2V180RK	.320 Sq
220	1V220RK	.295 Sq	2V220RK	.350 Sq
270	1V270RK	.325 Sq	2V270RK	.385 Sq
330	1V330RK	.355 Sq	2V330RK	.420 Sq
390	1V390RK	.385 Sq	2V390RK	.455 Sq
470	1V470RK	.415 Sq	2V470RK	.495 Sq
560	1V560RK	.455 Sq		

N2400 CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
1.0*	1W1RC	.150x.110	2W1RC	.150x.110
2.0*	1W2RC	.150x.110	2W2RC	.150x.110
2.5*	1W2.5RC	.150x.110	2W2.5RC	.150x.110
3.0*	1W3RC	.150x.110	2W3RC	.150x.110
5*	1W5RC	.150x.110	2W5RC	.150x.110
7	1W7RK	.100 Sq	2W7RK	.100 Sq
10	1W10RK	.100 Sq	2W10RK	.100 Sq
12	1W12RK	.100 Sq	2W12RK	.100 Sq
15	1W15RK	.100 Sq	2W15RK	.100 Sq
18	1W18RK	.100 Sq	2W18RK	.100 Sq
22	1W22RK	.100 Sq	2W22RK	.100 Sq
27	1W27RK	.100 Sq	2W27RK	.105 Sq
33	1W33RK	.100 Sq	2W33RK	.115 Sq
39	1W39RK	.105 Sq	2W39RK	.125 Sq
47	1W47RK	.115 Sq	2W47RK	.135 Sq
56	1W56RK	.125 Sq	2W56RK	.145 Sq
68	1W68RK	.135 Sq	2W68RK	.155 Sq
82	1W82RK	.145 Sq	2W82RK	.170 Sq
100	1W100RK	.155 Sq	2W100RK	.185 Sq
120	1W120RK	.170 Sq	2W120RK	.200 Sq
150	1W150RK	.185 Sq	2W150RK	.220 Sq
180	1W180RK	.205 Sq	2W180RK	.240 Sq
220	1W220RK	.225 Sq	2W220RK	.265 Sq
270	1W270RK	.245 Sq	2W270RK	.290 Sq
330	1W330RK	.270 Sq	2W330RK	.320 Sq
390	1W390RK	.290 Sq	2W390RK	.345 Sq
470	1W470RK	.315 Sq	2W470RK	.375 Sq
560	1W560RK	.345 Sq	2W560RK	.405 Sq
680	1W680RK	.375 Sq	2W680RK	.445 Sq
820	1W820RK	.410 Sq		
1000	1W1000RK	.450 Sq		

N3300 CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
2.5*	1X2.5RD	.150x.110	2X2.5RD	.150x.110
5*	1X5RD	.150x.110	2X5RD	.150x.110
7*	1X7RD	.150x.110	2X7RD	.150x.110
10*	1X10RK	.100 Sq	2X10RK	.100 Sq
12*	1X12RK	.100 Sq	2X12RK	.100 Sq
15*	1X15RK	.100 Sq	2X15RK	.100 Sq
18	1X18RK	.100 Sq	2X18RK	.100 Sq
22	1X22RK	.100 Sq	2X22RK	.100 Sq
27	1X27RK	.100 Sq	2X27RK	.100 Sq
33	1X33RK	.100 Sq	2X33RK	.110 Sq
39	1X39RK	.100 Sq	2X39RK	.115 Sq
47	1X47RK	.105 Sq	2X47RK	.125 Sq
56	1X56RK	.110 Sq	2X56RK	.135 Sq
68	1X68RK	.120 Sq	2X68RK	.145 Sq
82	1X82RK	.130 Sq	2X82RK	.155 Sq
100	1X100RK	.140 Sq	2X100RK	.170 Sq
120	1X120RK	.150 Sq	2X120RK	.185 Sq
150	1X150RK	.165 Sq	2X150RK	.200 Sq
180	1X180RK	.180 Sq	2X180RK	.225 Sq
220	1X220RK	.195 Sq	2X220RK	.245 Sq
270	1X270RK	.220 Sq	2X270RK	.265 Sq
330	1X330RK	.240 Sq	2X330RK	.295 Sq
390	1X390RK	.260 Sq	2X390RK	.315 Sq
470	1X470RK	.280 Sq	2X470RK	.340 Sq
560	1X560RK	.305 Sq	2X560RK	.370 Sq
680	1X680RK	.330 Sq	2X680RK	.405 Sq
820	1X820RK	.360 Sq	2X820RK	.450 Sq
1000	1X1000RK	.400 Sq	2X1000RK	.490 Sq
1200	1X1200RK	.435 Sq		
1500	1X1500RK	.485 Sq		

N4700 CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
5*	1Y5RD	.150x.110	2Y5RD	.150x.110
7*	1Y7RD	.150x.110	2Y7RD	.150x.110
10*	1Y10RK	.150x.110	2Y10RK	.150x.110
12*	1Y12RK	.150x.110	2Y12RK	.150x.110
15*	1Y15RK	.150x.110	2Y15RK	.150x.110
18	1Y18RK	.100 Sq	2Y18RK	.100 Sq
22	1Y22RK	.100 Sq	2Y22RK	.100 Sq
27	1Y27RK	.100 Sq	2Y27RK	.100 Sq
33	1Y33RK	.100 Sq	2Y33RK	.100 Sq
39	1Y39RK	.100 Sq	2Y39RK	.100 Sq
47	1Y47RK	.100 Sq	2Y47RK	.105 Sq
56	1Y56RK	.100 Sq	2Y56RK	.115 Sq
68	1Y68RK	.105 Sq	2Y68RK	.120 Sq
82	1Y82RK	.110 Sq	2Y82RK	.130 Sq
100	1Y100RK	.120 Sq	2Y100RK	.140 Sq
120	1Y120RK	.130 Sq	2Y120RK	.155 Sq
150	1Y150RK	.140 Sq	2Y150RK	.170 Sq
180	1Y180RK	.150 Sq	2Y180RK	.185 Sq
220	1Y220RK	.165 Sq	2Y220RK	.200 Sq
270	1Y270RK	.180 Sq	2Y270RK	.220 Sq
330	1Y330RK	.195 Sq	2Y330RK	.245 Sq
390	1Y390RK	.215 Sq	2Y390RK	.260 Sq
470	1Y470RK	.235 Sq	2Y470RK	.285 Sq
560	1Y560RK	.255 Sq	2Y560RK	.310 Sq
680	1Y680RK	.275 Sq	2Y680RK	.335 Sq
820	1Y820RK	.300 Sq	2Y820RK	.365 Sq
1000	1Y1000RK	.330 Sq	2Y1000RK	.405 Sq
1200	1Y1200RK	.355 Sq	2Y1200RK	.440 Sq
1500	1Y1500RK	.400 Sq	2Y1500RK	.490 Sq
1800	1Y1800RK	.435 Sq		
2200	1Y2200RK	.475 Sq		

N5600 CERAMIC

CAP. Pf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
5*	1Z5RD	.150x.110	2Z5RD	.150x.110
7*	1Z7RD	.150x.110	2Z7RD	.150x.110
10*	1Z10RK	.150x.110	2Z10RK	.150x.110
12*	1Z12RK	.150x.110	2Z12RK	.150x.110
15*	1Z15RK	.150x.110	2Z15RK	.150x.110
18*	1Z18RK	.150x.110	2Z18RK	.150x.110
22*	1Z22RK	.100 Sq	2Z22RK	.100 Sq
27*	1Z27RK	.100 Sq	2Z27RK	.100 Sq
33*	1Z33RK	.100 Sq	2Z33RK	.100 Sq
39	1Z39RK	.100 Sq	2Z39RK	.100 Sq
47	1Z47RK	.100 Sq	2Z47RK	.100 Sq
56	1Z56RK	.100 Sq	2Z56RK	.100 Sq
68	1Z68RK	.100 Sq	2Z68RK	.110 Sq
82	1Z82RK	.100 Sq	2Z82RK	.115 Sq
100	1Z100RK	.105 Sq	2Z100RK	.125 Sq
120	1Z120RK	.115 Sq	2Z120RK	.145 Sq
150	1Z150RK	.125 Sq	2Z150RK	.155 Sq
180	1Z180RK	.135 Sq	2Z180RK	.160 Sq
220	1Z220RK	.145 Sq	2Z220RK	.175 Sq
270	1Z270RK	.160 Sq	2Z270RK	.195 Sq
330	1Z330RK	.175 Sq	2Z330RK	.210 Sq
390	1Z390RK	.185 Sq	2Z390RK	.230 Sq
470	1Z470RK	.200 Sq	2Z470RK	.250 Sq
560	1Z560RK	.225 Sq	2Z560RK	.270 Sq
680	1Z680RK	.245 Sq	2Z680RK	.295 Sq
820	1Z820RK	.275 Sq	2Z820RK	.320 Sq
1000	1Z1000RK	.290 Sq	2Z1000RK	.350 Sq
1200	1Z1200RK	.315 Sq	2Z1200RK	.385 Sq
1500	1Z1500RK	.345 Sq	2Z1500RK	.430 Sq
1800	1Z1800RK	.375 Sq	2Z1800RK	.465 Sq
2200	1Z2200RK	.415 Sq		
2700	1Z2700RK	.460 Sq		

MUCON® THINLINE GENERAL PURPOSE SUBminiature CERAMIC CAPACITORS

LOW-VAR® CERAMIC

CAP. mmf.	25 WVDC MUCON PART	25 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
50	1D50RM	.100 Sq	2D50RM	.100 Sq
56	1D56RM	.100 Sq	2D56RM	.100 Sq
68	1D68RM	.100 Sq	2D68RM	.105 Sq
75	1D75RM	.100 Sq	2D75RM	.110 Sq
82	1D82RM	.100 Sq	2D82RM	.120 Sq
100	1D100RM	.105 Sq	2D100RM	.125 Sq
120	1D120RM	.115 Sq	2D120RM	.130 Sq
150	1D150RM	.125 Sq	2D150RM	.145 Sq
180	1D180RM	.135 Sq	2D180RM	.160 Sq
220	1D220RM	.150 Sq	2D220RM	.175 Sq
270	1D270RM	.160 Sq	2D270RM	.185 Sq
330	1D330RM	.175 Sq	2D330RM	.205 Sq
390	1D390RM	.190 Sq	2D390RM	.230 Sq
470	1D470RM	.205 Sq	2D470RM	.245 Sq
510	1D510RM	.215 Sq	2D510RM	.255 Sq
560	1D560RM	.225 Sq	2D560RM	.265 Sq
620	1D620RM	.235 Sq	2D620RM	.280 Sq
680	1D680RM	.250 Sq	2D680RM	.290 Sq
750	1D750RM	.255 Sq	2D750RM	.305 Sq
820	1D820RM	.270 Sq	2D820RM	.315 Sq
910	1D910RM	.280 Sq	2D910RM	.335 Sq
1000	1D1000RM	.290 Sq	2D1000RM	.345 Sq
1200	1D1200RM	.320 Sq	2D1200RM	.375 Sq
1500	1D1500RM	.350 Sq	2D1500RM	.415 Sq
1800	1D1800RM	.380 Sq	2D1800RM	.455 Sq
2200	1D2200RM	.420 Sq	2D2200RM	.495 Sq
2700	1D2700RM	.460 Sq		

HIGH-K CERAMIC

CAP. mmf.	25 WVDC MUCON PART	25 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
500	1F500RN	.100 Sq	2F500RN	.120 Sq
750	1F750RN	.125 Sq	2F750RN	.140 Sq
1000	1F1000RN	.140 Sq	2F1000RN	.160 Sq
1500	1F1500RN	.165 Sq	2F1500RN	.190 Sq
2000	1F2000RN	.185 Sq	2F2000RN	.220 Sq
2500	1F2500RN	.205 Sq	2F2500RN	.245 Sq
3300	1F3300RN	.230 Sq	2F3300RN	.280 Sq
4700	1F4700RN	.275 Sq	2F4700RN	.325 Sq
5000	1F5000RN	.285 Sq	2F5000RN	.335 Sq
6800	1F6800RN	.325 Sq	2F6800RN	.385 Sq
8200	1F8200RN	.350 Sq	2F8200RN	.420 Sq
10000	1F01RN	.385 Sq	2F01RN	.460 Sq
15000	1F015RN	.465 Sq		

SPECIFICATIONS

Capacitance: <100 @ 1 MHz ≥100 @ 1 KHz

Capac. tol.: Last letter of part number. Specify Z for Guaranteed Min. Value, N for ±30%, M for ±20%, K for ±10%, J for ±5%

Wire Leads: Unless otherwise specified, No. 26 tinned copper wire, 1¼″ long min. Specify R for radial or A for axial wire leads, just after capacitance value in Part No. All part numbers in tables show R for radial leads. Request pure nickel for welding.

Ribbon Leads: For lower lead inductance specify RLA, just after capacitance value in Part No. .093″ x .006″ ribbon leads for units with max. size of .150″ and up; .045″ x .006″ where max. size is less than .150″.

Lead Spacing: Radial lead capacitors have C to C lead spacing as follows:
.100 ± 1/32 for catalog width thru .275
.200 ± 1/32 for catalog width .280 thru .475
.400 ± 1/32 for catalog width >.475
[Not Applicable for #30 AWG]

Power Factor: Less than 2.5%, at 1KHz, 25%C, Approx. 1 volt

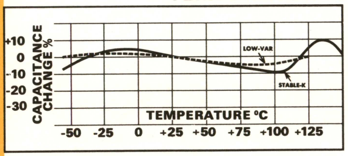
Temp. Range:
LOW-VAR Ceramic −60°C to +125°C
STABLE-K Ceramic −60°C to +125°C
HIGH-K Ceramic −60°C to +85°C. Derate 20% at 100°C
SUPER-K Ceramic −20°C to +85°C

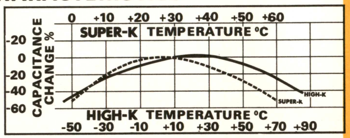
Size: Max. area dimensions are listed in tables. Max. thick is .090″

Coating: Vacuum-impregnated phenolic insulation.

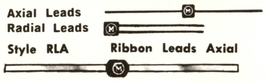
Freq. Charact.: See applicable curves on Page 7.

TEMPERATURE CHARACTERISTICS





Any intermediate capacitance value or any rectangular capacitor (instead of square) is readily obtainable in approximately the same time.



STABLE-K CERAMIC

CAP. mmf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
100	1E100RM	.100 Sq	2E100RM	.100 Sq
120	1E120RM	.100 Sq	2E120RM	.100 Sq
150	1E150RM	.100 Sq	2E150RM	.100 Sq
180	1E180RM	.100 Sq	2E180RM	.100 Sq
220	1E220RM	.100 Sq	2E220RM	.105 Sq
270	1E270RM	.100 Sq	2E270RM	.120 Sq
330	1E330RM	.105 Sq	2E330RM	.130 Sq
390	1E390RM	.115 Sq	2E390RM	.140 Sq
470	1E470RM	.120 Sq	2E470RM	.150 Sq
510	1E510RM	.125 Sq	2E510RM	.155 Sq
560	1E560RM	.130 Sq	2E560RM	.160 Sq
680	1E680RM	.140 Sq	2E680RM	.175 Sq
750	1E750RM	.145 Sq	2E750RM	.180 Sq
820	1E820RM	.155 Sq	2E820RM	.190 Sq
1000	1E1000RM	.165 Sq	2E1000RM	.210 Sq
1200	1E1200RM	.180 Sq	2E1200RM	.225 Sq
1500	1E1500RM	.200 Sq	2E1500RM	.250 Sq
1800	1E1800RM	.215 Sq	2E1800RM	.270 Sq
2200	1E2200RM	.235 Sq	2E2200RM	.295 Sq
2700	1E2700RM	.265 Sq	2E2700RM	.325 Sq
3300	1E3300RM	.290 Sq	2E3300RM	.355 Sq
4700	1E4700RM	.335 Sq	2E4700RM	.420 Sq
5600	1E5600RM	.365 Sq	2E5600RM	.455 Sq
6800	1E6800RM	.400 Sq	2E6800RM	.500 Sq
8200	1E8200RM	.435 Sq	2E8200RM	.550 Sq
10000	1E01RM	.480 Sq		
12000	1E012RM	.520 Sq		

SUPER-K® CERAMIC

CAP. mmf.	50 WVDC MUCON PART	50 WVDC MAX. SIZE	200 WVDC MUCON PART	200 WVDC MAX. SIZE
1000	1G001RN	.100 Sq	2G001RN	.115 Sq
1500	1G0015RN	.120 Sq	2G0015RN	.135 Sq
2000	1G002RN	.135 Sq	2G002RN	.160 Sq
2500	1G0025RN	.145 Sq	2G0025RN	.175 Sq
3300	1G0033RN	.165 Sq	2G0033RN	.195 Sq
4700	1G0047RN	.200 Sq	2G0047RN	.230 Sq
5000	1G005RN	.205 Sq	2G005RN	.240 Sq
6800	1G0068RN	.230 Sq	2G0068RN	.275 Sq
8200	1G0082RN	.250 Sq	2G0082RN	.300 Sq
10000	1G01RN	.275 Sq	2G01RN	.330 Sq
15000	1G015RN	.335 Sq	2G015RN	.395 Sq
25000	1G025RN	.425 Sq	2G025RN	.505 Sq

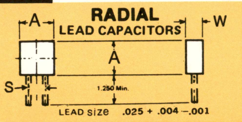
NPO *ULTRA-STABLE* M-CAPS® CERAMIC CAPACITORS

QUALIFIED TO **MIL-C-20**

0±30 PPM/°C Per MIL-C-20
.1 to 100,000 Pf —55°C to +125°C
Low Dissipation Factor Tight Tolerances

NPO M-CAPS are ideally suited for application in R-C timing network, tuned circuits, filters, or any electronic design demanding extreme stability with temperature, time and frequency.

NON ER	ER	SLASH SHEET	VOLT	CAP. RANGE PF	Amax	Wmax	S	LEAD DIAM.
CC13	CCR13	47	100 50	.1-68 82-220	.100	.100	.100±.015	.016
CC14	CCR14	48	100 50	82-220 270-560	150	100	.100±.010	.016
CC15 CC19	CCR15 CCR19	39	200 100 50	1-330 390-1800 2200-3300	.200	.115	.200±.015 .100±.015	.025
CC16	CCR16	40	200 100 50	390-1800 2200-4700 5600-10,000	.300	.115	.200±.05	.025
CC17	CCR17	41	200 100 50	2200-3300 5600-12,000 15,000-47,000	.400	.150	.200±.020	.025
CC18	CCR18	42	200 100 50	3900-4700 15000-18000 56000-68000	.500	.200	.400±.020	.025



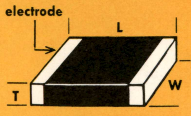
FIXED CAPACITORS, CERAMIC DIELECTRIC (TEMPERATURE COMPENSATING), ESTABLISHED RELIABILITY

NON ER	CC13	CG	221	G	
ER	CCR13	CG	221	G	M

STYLE	CAPACITANCE	CAPACITANCE TOLERANCE	FAILURE RATE LEVEL
13 = .100 x .100 14 = .150 x .150 15 = .200 x .200 16 = .300 x .300 17 = .400 x .400 18 = .500 x .500 19 = .200 x .200	Nominal capacitance expressed in picofarads (pF) by three - digit number, first two digits represent significant figures, last digit specifies number of zeros to follow. When the nominal value is less than 10 pF, the letter 'R' indicates the decimal point and the succeeding digit(s) represent significant figure(s). For example: IRO indicates 1.0 pF; R75 indicates 0.75 pF and OR5 indicates 0.5 pF.	B = ± .1 pF C = ± .25 pF D = ± .5 pF F = ± 1% G = ± 2% J = ± 5% K = ± 10%	Expressed in % per 1000 hours M = 1.0% P = 0.1%

MUCON® MONOLITHIC CERAMIC CHIPS

MUCON MONOLITHIC MULTI-LAYER CERAMIC CHIPS For HYBRID CIRCUITS are available in 7 standard sizes in both NPO & BX type characteristics. Standard electrodes are silver, with palladium-silver & gold also available. Part numbers for standard parts are listed below; any intermediate capacitance value is available, at no increase in price. Check factory for available non standard sizes.



WORKING VOLTAGE: 50 WVDC

	STABLE-K	NPO
CAPACITANCE:	100 PF.@1MHz,1V.,25°C >100 PF.@1KHz, 1V.,25°C	1000PF.@1MHz,25°C >1000PF.@1KHz,25°C
POWER FACTOR:	2.5% max.@ 1KHz	.1%max.@1MHz
TEMP. CHARACT:	±15% max. from 25°C See Curve	±.3% max from 25°C See curve
CAPAC. TOL:	Last letter of part number. Specify M for±20% K for±10%, J for±5%, G for±2%	
INSUL. RESIST:	100,000 Megohms or 1000 Megohm-Microfarads, whichever is less	
WORK VOLTAGE:	50 WVDC	
TEMP. RANGE:	-55°C to +125°C	

SIZE 01 .050x.050x.050 STABLE K

CAP.PF.	PART NO.
100	01E101M
120	01E121M
150	01E151M
180	01E181M
220	01E221M
270	01E271M
330	01E331M
390	01E391M
470	01E471M
560	01E561M
680	01E681M
820	01E821M
1000	01E102M
1200	01E122M
1500	01E152M
1800	01E182M
2200	01E222M
2700	01E272M
3300	01E332M
3900	01E392M
4700	01E472M
5600	01E562M
6800	01E682M
8200	01E822M
10000	01E103M

SIZE 02 .080x.050x.050 STABLE K

CAP.PF.	PART NO.
270	02E271M
330	02E331M
390	02E391M
470	02E471M
560	02E561M
680	02E681M
820	02E821M
1000	02E102M
1200	02E122M
1500	02E152M
1800	02E182M
2200	02E222M
2700	02E272M
3300	02E332M
3900	02E392M
4700	02E472M
5600	02E562M
6800	02E682M
8200	02E822M
10000	02E103M
12000	02E123M
15000	02E153M
18000	02E183M
22000	02E223M
27000	02E273M

SIZE 03 .095x.050x.060 STABLE K

CAP.PF.	PART NO.
270	03E271M
330	03E331M
390	03E391M
470	03E471M
560	03E561M
680	03E681M
820	03E821M
1000	03E102M
1200	03E122M
1500	03E152M
1800	03E182M
2200	03E222M
2700	03E272M
3300	03E332M
3900	03E392M
4700	03E472M
5600	03E562M
6800	03E682M
8200	03E822M
10000	03E103M
12000	03E123M
15000	03E153M
18000	03E183M
22000	03E223M
27000	03E273M
39000	03E393M

SIZE 04 .150x.050x.050 STABLE K

CAP.PF.	PART NO.
680	04E681M
820	04E821M
1000	04E102M
1200	04E122M
1500	04E152M
1800	04E182M
2200	04E222M
2700	04E272M
3300	04E332M
3900	04E392M
4700	04E472M
5600	04E562M
6800	04E682M
8200	04E822M
10000	04E103M
12000	04E123M
15000	04E153M
18000	04E183M
22000	04E223M
27000	04E273M
33000	04E333M
39000	04E393M
47000	04E473M
56000	04E563M
68000	04E683M

SIZE 05 .125x.095x.065 STABLE K

CAP.MF.	PART NO.
.001	05E102M
.0012	05E122M
.0015	05E152M
.0018	05E182M
.0022	05E222M
.0027	05E272M
.0033	05E332M
.0039	05E392M
.0047	05E472M
.0056	05E562M
.0068	05E682M
.0082	05E822M
.010	05E103M
.012	05E123M
.015	05E153M
.018	05E183M
.022	05E223M
.027	05E273M
.033	05E333M
.039	05E393M
.047	05E473M
.056	05E563M
.068	05E683M
.082	05E823M
.10	05E104M

SIZE 06 .175x.070x.070 STABLE K

CAP.MF.	PART NO.
.001	06E102M
.0012	06E122M
.0015	06E152M
.0018	06E182M
.0022	06E222M
.0027	06E272M
.0033	06E332M
.0039	06E392M
.0047	06E472M
.0056	06E562M
.0068	06E682M
.0082	06E822M
.010	06E103M
.012	06E123M
.015	06E153M
.018	06E183M
.022	06E223M
.027	06E273M
.033	06E333M
.039	06E393M
.047	06E473M
.056	06E563M
.068	06E683M
.082	06E823M
.10	06E104M

SIZE 07 .325x.095x.070 STABLE K

CAP.MF.	PART NO.
.005	07E502M
.0056	07E562M
.0068	07E682M
.0082	07E822M
.010	07E103M
.012	07E123M
.015	07E153M
.018	07E183M
.022	07E223M
.027	07E273M
.033	07E333M
.039	07E393M
.047	07E473M
.056	07E563M
.068	07E683M
.082	07E823M
.10	07E104M
.12	07E124M
.15	07E154M
.18	07E184M
.22	07E224M
.27	07E274M
.33	07E334M
.39	07E394M

NPO (Size 01)

CAP.PF.	PART NO.
10	01C100K
12	01C120K
15	01C150K
18	01C180K
22	01C220K
27	01C270K
33	01C330K
39	01C390K
47	01C470K
56	01C560K
68	01C680K
82	01C820K
100	01C101K
120	01C121K
150	01C151K
180	01C181K
220	01C221K
270	01C271K
330	01C331K
470	01C471K
560	01C561K

NPO (Size 02)

CAP.PF.	PART NO.
10	02C100K
12	02C120K
15	02C150K
18	02C180K
22	02C220K
27	02C270K
33	02C330K
39	02C390K
47	02C470K
56	02C560K
68	02C680K
82	02C820K
100	02C101K
120	02C121K
150	02C151K
180	02C181K
220	02C221K
270	02C271K
330	02C331K
470	02C471K
560	02C561K
680	02C681K
820	02C821K
1000	02C102K
1200	02C122K
1500	02C152K

NPO (Size 03)

CAP.PF.	PART NO.
10	03C100K
12	03C120K
15	03C150K
18	03C180K
22	03C220K
27	03C270K
33	03C330K
39	03C390K
47	03C470K
56	03C560K
68	03C680K
82	03C820K
100	03C101K
120	03C121K
150	03C151K
180	03C181K
220	03C221K
270	03C271K
330	03C331K
470	03C471K
560	03C561K
680	03C681K
820	03C821K
1000	03C102K
1200	03C122K
1500	03C152K
1800	03C182K

NPO (Size 04)

CAP.PF.	PART NO.
27	04C270K
33	04C330K
39	04C390K
47	04C470K
56	04C560K
68	04C680K
82	04C820K
100	04C101K
120	04C121K
150	04C151K
180	04C181K
220	04C221K
270	04C271K
330	04C331K
390	04C391K
470	04C471K
560	04C561K
680	04C681K
820	04C821K
1000	04C102K
1200	04C122K
1500	04C152K
1800	04C182K
2200	04C222K
2700	04C272K
3300	04C332K

NPO (Size 05)

CAP.PF.	PART NO.
56	05C560K
68	05C680K
82	05C820K
100	05C101K
120	05C121K
150	05C151K
180	05C181K
220	05C221K
270	05C271K
330	05C331K
390	05C391K
470	05C471K
560	05C561K
680	05C681K
820	05C821K
1000	05C102K
1200	05C122K
1500	05C152K
1800	05C182K
2200	05C222K
2700	05C272K
3300	05C332K
3900	05C392K
4700	05C472K
5600	05C562K
6800	05C682K
8200	05C822K
10000	05C103K

NPO (Size 06)

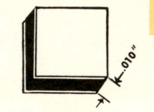
CAP.PF.	PART NO.
56	06E560K
68	06C680K
82	06C820K
100	06C101K
120	06C121K
150	06C151K
180	06C181K
220	06C221K
270	06C271K
330	06C331K
390	06C391K
470	06C471K
560	06C561K
680	06C681K
820	06C821K
1000	06C102K
1200	06C122K
1500	06C152K
1800	06C182K
2200	06C222K
2700	06C272K
3300	06C332K
3900	06C392K
4700	06C472K
5600	06C562K
6800	06C682K

NPO (Size 07)

CAP.PF.	PART NO.
100	07C101K
120	07C121K
150	07C151K
180	07C181K
220	07C221K
270	07C271K
330	07C331K
390	07C391K
470	07C471K
560	07C561K
680	07C681K
820	07C821K
1000	07C102K
1200	07C122K
1500	07C152K
1800	07C182K
2200	07C222K
2700	07C272K
3300	07C332K
3900	07C392K
4700	07C472K
5600	07C562K
6800	07C682K
8200	07C822K
10000	07C103K
12000	07C123K
15000	07C153K
18000	07C183K
22000	07C223K

MUCON® SINGLE LAYER CHIPS

For a broad range of capacitance and sizes, MUCON Single-Layer Chips are available in all MUCON dielectrics. Part numbers and sizes of the five most popular are listed below. For temperature-compensation requirements, Chips are also available in N080 thru N5600 dielectrics with specifications as shown on pages 8, 9 and 10. Silver electrodes are standard; palladium-silver or gold electrodes are also available.



single layer element approx. .010" thick

SUPER-K® 25 WVDC

CAP. mmf.	MUCON PART	SQ. SIZE
150	PG150N	.030
250	PG250N	.040
500	PG500N	.055
750	PG750N	.065
1000	PG001N	.075
2000	PG002N	.110
3000	PG003N	.130
5000	PG005N	.170
10000	PG01N	.240

HIGH-K 25 WVDC

CAP. mmf.	MUCON PART	SQ. SIZE
75	PF 75N	.030
160	PF160N	.040
250	PF250N	.050
500	PF500N	.075
750	PF750N	.090
1000	PF001N	.100
2000	PF002N	.145
3000	PF003N	.175
5000	PF005N	.225

STABLE-K 50 WVDC

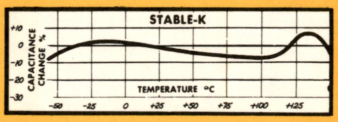
CAP. mmf.	MUCON PART	SQ. SIZE
39	PE39M	.030
68	PE68M	.040
82	PE82M	.045
100	PE100M	.050
120	PE120M	.055
150	PE150M	.060
180	PE180M	.070
220	PE220M	.075
270	PE270M	.080
330	PE330M	.090
390	PE390M	.100
470	PE470M	.110
560	PE560M	.120
680	PE680M	.130
820	PE820M	.140
1000	PE001M	.155
1200	PE0012M	.170
1500	PE0015M	.190
1800	PE0018M	.210
2200	PE0022M	.230
2700	PE0027M	.255

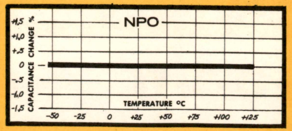
LOW-VAR® 50 WVDC

CAP. mmf.	MUCON PART	SQ. SIZE
15	PD15M	.030
25	PD25M	.040
33	PD33M	.050
39	PD39M	.055
47	PD47M	.060
56	PD56M	.065
68	PD68M	.070
82	PD82M	.075
100	PD100M	.085
120	PD120M	.090
150	PD150M	.100
180	PD180M	.110
220	PD220M	.120
270	PD270M	.135
330	PD330M	.150
390	PD390M	.165
470	PD470M	.180
560	PD560M	.195
680	PD680M	.215
820	PD820M	.235
1000	PD001M	.260

NPO 50 WVDC

CAP. mmf.	MUCON PART	SQ. SIZE
.5	PC .5M	.030
1.2	PC1.2M	.040
1.5	PC1.5M	.050
1.8	PC1.8M	.055
2.2	PC2.2M	.060
2.7	PC2.7M	.065
3.3	PC3.3M	.070
3.9	PC3.9M	.075
4.7	PC4.7M	.085
5.6	PC5.6M	.090
6.8	PC6.8M	.100
8.2	PC8.2M	.110
10	PC10M	.120
12	PC12M	.130
15	PC15M	.145
18	PC18M	.160
22	PC22M	.175
27	PC27M	.195
33	PC33M	.215
39	PC39M	.235
47	PC47M	.255



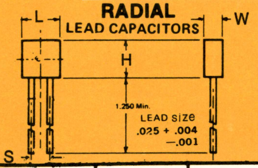


NPO ULTRA-STABLE MU-CAPS® CERAMIC CAPACITORS QUALIFIED TO MIL-C-20

NPO MU-CAPS are ideally suited for application in R-C timing network, tuned circuits, filters, or any electronic design demanding extreme stability with temperature, time and frequency.

0±30 PPM/°C Per MIL-C-20
.1 to 100,000 Pf —55°C to +125°C
Low Dissipation Factor
Tight Tolerances

RADIAL
LEAD CAPACITORS



MIL. EQUIV.	H & L	W	S
CC05, CCR05	.190 ± .010	.090 ± .010	.200 ± .015
CC09, CCR09	.190 ± .010	.090 ± .010	.100 ± .015
CC06, CCR06	.290 ± .010	.090 ± .010	.200 ± .015
CC07, CCR07	.480 ± .020	.140 ± .010	.400 ± .020
CC08, CCR08	.480 ± .020	.240 ± .010	.400 ± .020

NON-ER	ER	SLASH SHEET	VOLT	CAP. RANGE PF
CC05 CC09	CCR05 CCR09	35	200 100 50	1-330 360-1800 2200-3300
CC06	CCR06	36	200 100 50	360-1800 2000-4700 5100-18000
CC07	CCR07	37	200 100 50	2200-4700 5600-12000 15000-100000
CC08	CCR08	38	200 100 50	3900-4700 15000-18000 56000-68000

FIXED CAPACITORS, CERAMIC DIELECTRIC (TEMPERATURE COMPENSATING), ESTABLISHED RELIABILITY

NON ER	CC05	CG	102	G	
ER	CCR05	CG	102	G	M
	STYLE	NPO	CAPACITANCE	CAPACITANCE TOLERANCE	FAILURE RATE LEVEL

STYLE

05=Radial .190x.190	75=Axial .160x.090
09=Radial .190x.190	76=Axial .250x.090
06=Radial .290x.290	77=Axial .390x.140
07=Radial .480x.480	78=Axial .500x.250
08=Radial .480x.480	79=Axial .690x.350

CAPACITANCE

Nominal capacitance expressed in picofarads (pF) by three - digit number, first two digits represent significant figures, last digit specifies number of zeros to follow. When the nominal value is less than 10 pF, the letter 'R' indicates the decimal point and the succeeding digit(s) represent significant figure(s). For example: IRO indicates 1.0 pF; R75 indicates 0.75 pF and OR5 indicates 0.5 pF.

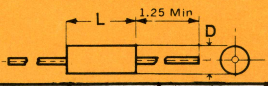
CAPACITANCE TOLERANCE

B = ± .1 pF
C = ± .25 pF
D = ± .5 pF
F = ± 1%
G = ± 2%
J = ± 5%
K = ± 10%

FAILURE RATE LEVEL

Expressed in % per 1000 hours
M = 1.0%
P = 0.1%
R = 0.01%

AXIAL
LEAD CAPACITORS



MIL.EQUIV.	L	D	LEAD SIZE
CC75, CCR75	.160 ± .010	.090 ± .010	.016
CC76, CCR76	.250 ± .010	.090 ± .010	.016
CC77, CCR77	.390 ± .010	.140 ± .C10	.025
CC78, CCR78	.500 ± .020	.250 ± .015	.025
CC79, CCR79	.690 ± .020	.350 ± .015	.025

NON-ER	ER	SLASH SHEET	VOLT	CAP. RANGE PF
CC75	CCR75	27	200 100 50	.1-75 82-240 270-680
CC76	CCR76	28	200 100 50	82-130 270-680 750-1000
CC77	CCR77	29	200 100 50	150-680 750-2200 2400-5600
CC78	CCR78	30	200 100 50	820-3300 3900-12000 15000-27000
CC79	CCR79	31	200 100 50	3900-10000 15000-39000 47000-82000

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βeta Caps Ceramic Capacitors

Parallel plate capacitors for use in microwave and broad band frequencies up through 50ghz

.1pf to 5000pf / Ultra high Q's
Precise Tolerances / Microwave characterized

Republic Electronics Corp.
Technology for over 30 years

Specifications

Electrical Specifications

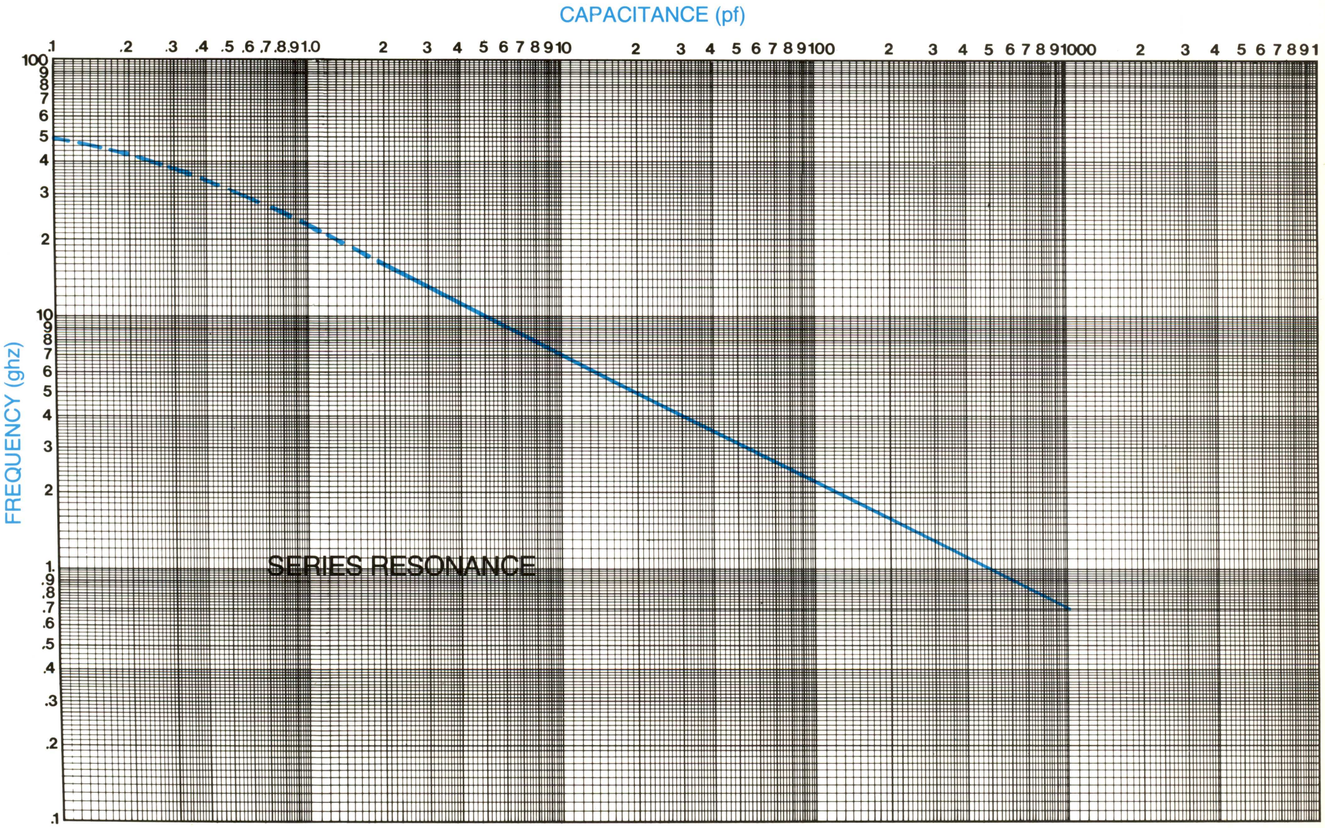
Operating Frequency: to 50 GHz
Capacitance Range: .1pf to 5000pf
Capacitance Measurement: ≤ 1000pf at 1mhz; > 1000pf at 1kHz
Working Voltage: 50 VDC through 500VDC (see ordering information)
Insulation Resistance: > 10^6 megohms at 25°C, 10^5 megohms at 125°C
Equivalent Series Resistance: < .01 ohms at 1 GHz
Operating Temperature Range: −55°C through 125°C
Series Resonance: See curve
Dielectric Strength: 250% of WVDC
Capacitance Tolerance: .1pf through 9.1pf: ± .1pf, ± .25pf or ± .5pf, 10pf and up ± 1%, ± 2%, ± 5%, ± 10% or ± 20%

Mechanical Characteristics

Hermeticity: The dielectrics are impervious to moisture and cleaning solvents.
Shock and Vibration: Exceeds the requirements of MIL-C-55681.
Dimensions: See table (from .010″ square to .200″ square; thickness from .003″ to .100″)
Terminations: 100μ″ minimum gold over nickel barrier or palladium silver. The gold finish meets MIL-G-45204B/2 type III grade A and type I grade A.

βeta Caps meet and/or exceed appliable requirements of MIL-C-55681B and MIL-C20.

Performance Curve



Selector Guide

SIZE Max. L,W in(mm) Min. L,W in(mm)	CAPACITANCE Value	.1pf	.2pf	.3pf	.4pf	.5pf	.6pf	.7pf	.8pf	.9pf	1.0pf	1.1pf	1.2pf	1.3pf	1.4pf	1.5pf	1.6pf	1.7pf	1.8pf	1.9pf	2.0pf	2.1pf	2.2pf	2.4pf	2.7pf	3.0pf	3.3pf	3.6pf	3.9pf	4.3pf	4.7pf	5.1pf	5.6pf	6.2pf	6.8pf	7.5pf	8.2pf	9.1pf	10pf	11pf	12pf	13pf	15pf	16pf	18pf	20pf	22pf	24pf	27pf	30pf	33pf	36pf	39pf	43pf	47pf	51pf	56pf	62pf	68pf	75pf	82pf	91pf	100pf	110pf	120pf	130pf	150pf	160pf	180pf	200pf	220pf	240pf	270pf	300pf	330pf	360pf	390pf	430pf	470pf	510pf	560pf	620pf	680pf	750pf	820pf	910pf	1000pf	1100pf	1200pf	1500pf	1600pf	1800pf	2000pf	2200pf	2400pf	2700pf	3000pf	3300pf	3600pf	3900pf	4300pf	4700pf	5000pf
	Code	OR1	OR2	OR3	OR4	OR5	OR6	OR7	OR8	OR9	1R0	1R1	1R2	1R3	1R4	1R5	1R6	1R7	1R8	1R9	2R0	2R1	2R2	2R4	2R7	3R0	3R3	3R6	3R9	4R3	4R7	5R1	5R6	6R2	6R8	7R5	8R2	9R1	100	110	120	130	150	160	180	200	220	240	270	300	330	360	390	430	470	510	560	620	680	750	820	910	101	111	121	131	151	161	181	201	221	241	271	301	331	361	391	431	471	511	561	621	681	751	821	911	102	112	122	152	162	182	202	222	242	272	302	332	362	392	432	472	502
01 .020(.510) .010(.250)																																																																																																								
02 .030(.760) .020(.510)																																																																																																							
03 .040(1.02) .030(.760)																																																																																																							
04 .060(1.52) .040(1.02)																																																																																																					
06 .080(2.03) .060(1.52)																																																																																																						
08 .100(2.54) .080(2.03)																																																																																																					
10 .150(3.81) .100(2.54)																																																																																																							
15 .200(5.08) .150(3.81)																																																																																																						

= Hi-Q, High frequency uses = Broad Band applications = High frequency and Broad Band applications

Ordering Information

PP - 01 - 0R5 - B - A - G

Case Size
see chart

Capacitance Code
see selector guide

Tolerance
< 10pf: B = ±.1pf
C = ±.25pf
D = ±.5pf
≥ 10pf: F = ±1%
G = ±2%
J = ±5%
K = ±10%
M = ±20%

Working Voltage (DC)
A = 50WVDC
B = 100
C = 200
D = 300
E = 500

End Termination
G = 100μ″ minimum gold over nickel
P = Ag/Pd, 3:1 ratio
S = Single ribbon lead
A = Axial ribbon leads
R = Radial ribbon leads

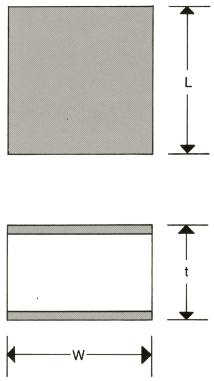
The above part number describes a parallel plate capacitor, .015″ ± .005″ square, with a capacitance of .5pf ± .1PF, 50 WVDC and termination G.
All ribbon leads are pure silver, other metals are available.
Leads are cut to the exact dimensions of the capacitor.
For special requirements ie. (rectangular parts)— consult factory.

*Parallel plate capacitors are available in a complete line of Temperature Compensating materials from P090 thru N5600.

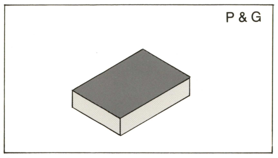
Case Dimensions

CASE SIZE	DIMENSIONS Min. L & W	Max. L & W	t
01	.010 (.250)	.020 (.510)	.003 (.080) to .100 (2.54)
02	.020 (.510)	.030 (.760)	
03	.030 (.760)	.040 (1.02)	
04	.040 (1.02)	.060 (1.52)	
06	.060 (1.52)	.080 (2.03)	
08	.080 (2.03)	.100 (2.54)	
10	.100 (2.54)	.150 (3.81)	
15	.150 (3.81)	.200 (5.08)	

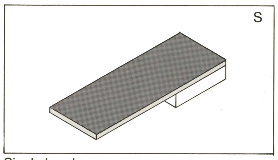
All dimensions in inches, except those in parenthesis are in millimeters.



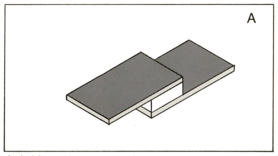
Lead Configurations



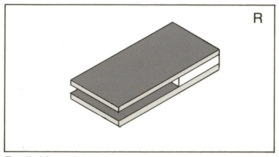
Ceramic Dielectric



Single Lead



Axial Leads



Radial Leads

For over thirty years Republic Electronics has been manufacturing quality products for the industry. We maintain the highest degree of production standards and constantly update our equipment for peak efficiency. Our commitment to make tough, reliable and exacting products, makes Republic Electronics the manufacturer others set their standards by.

Republic Electronics Corp.
Technology for over 30 years

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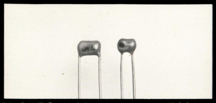
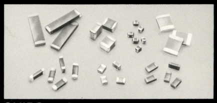
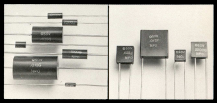
Additional Products



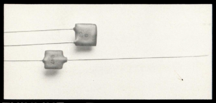
M-CAPS — Miniature monolithic



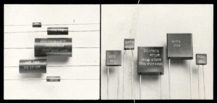
CHIPS — Single or multi-layer



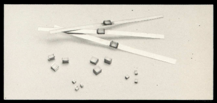
MU-CAPS — **NPO** ultra-stable



THINLINE — Temperature compensating



QPL — **ER** approved MIL-C-20. **NPO** characteristic



QPL — approved to MIL-C-55681B & MIL-C11272C **Ultra Q** microwave, **BP & BG** characteristic

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